Industrie Service

Final Determination Report

Determination of "Utilization of Coal Mine Methane at the Coal Mine named after O.F. Zasyadko" JI project in Donetsk, Ukraine

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Industrie Service

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Client:	Lease Enterprise "Coal Mine named after O.F. Zasyadko" Prospekt Zasyadko Donetsk, 83054 Ukraine
Contract approved by:	Werner Betzenbichler
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Summary:

The Certification Body "Climate and Energy" of TÜV SÜD Industrie Service GmbH has been ordered by Lease Enterprise "Coal Mine named after O.F. Zasyadko" in Donetsk, Ukraine, to determine the above mentioned JI-project in Ukraine.

The determination of this project has been performed by document reviews, interviews by e-mail and on-site inspections, audits at the locations of the project and interviews at the offices of the project owner. LoAs of all involved parties are available for this project.

As the result of this procedure, it can finally be confirmed that the project is in line with all requirements set by the JI-Supervisory Committee, the Marrakech Accords and in the Kyoto Protocol and is in accordance with the rules for track 2 of the JI-Supervisory Committee.

Thus TÜV SÜD will recommend this project for registration in accordance with the rules of track 2 of the JI Supervisory committee.

The assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 5 889 523 tons CO_{2e} (to be issued as ERUs) in the crediting period from 2008 - 2012 (First Commitment Period of the Kyoto Protocol), resulting in annual emission reductions of 1 177 905 tons CO_{2e}, represents a reasonable estimation using the assumptions given by the currently available project documents and additional background information.

Work carried out by:	Thomas Kleiser (project manager, lead auditor) Olga Mikhaylyuk (local expert); Dr. Geiger (geological expert), Konrad Tausche (auditor), Abhishek Goyal (auditor), Olena Maslova and Anna Peretykina (trainees)	Internal Quality Control by: Werner Betzenbichler, Javier Castro

Abbreviations

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CBM	Coal-bed Methane
CMM	Coal Mine Methane
CR	Clarification Request
DFP	Designated Focal Point
DNA	Designated National Authority
DOE	Designated Operational Entity
DP	Determination Protocol
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
ERU	Emission Reduction Unit
FSC	Forest Stewardship Council
GHG	Greenhouse gas(es)
GSP	Global Stakeholder Consultation Process
IRR	Internal Rate of Return
JI	Joint Implementation
KP	Kyoto Protocol
LoA	Letter of Approval
MP	Monitoring Plan
MS	Management System
NGO	Non Governmental Organisation
NPV	Net Present Value
PDD	Project Design Document
SC	Supervisory Committee
VVM	Validation and Verification Manual

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1 Introduction

1.1 Objective

Lease Enterprise "Coal Mine named after O.F. Zasyadko" in Donetsk, Ukraine has commissioned TÜV SÜD to conduct a determination of the ""Utilization of Coal Mine Methane at the Coal Mine named after O.F. Zasyadko", JI project in Donetsk, Ukraine with regard to the relevant requirements for JI project activities. The determination serves as a conformity test of the project design and is a requirement for all JI projects. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Determination is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions (in particular ERUs) in the first commitment period under the Kyoto Protocol).

UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

1.2 Additional Remark on the project´s history

The project was already pre-determined by TÜV SÜD in 2005. At that time the project was split in two separate projects with two different titles. Pre-determination was done for the Austrian CDM/JI programme and the Dutch Erupt tender. Due to the long-lasting process until a registration of JI track 2 projects was feasible and thus appearing delays in the project realisation (due to missing finance resources) the project concept had to be adjusted although the general decision to go for the project was not questioned again. As a result of this process the "projects" then were combined in one new JI track 2 project which was uploaded on JI-SC website in February 2007 for starting the global stakeholder consultation process. To make the whole determination process more transparent additional to the information reference list (Annex 2 C of this report) also the former information reference lists with information of the old PDDs are attached to this report.

1.3 Scope

The determination scope is defined as an independent and objective review of the project design document (PDD), the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual (see www.vvmanual.info), employed a risk-based approach in the determination, focusing on the identification of significant risks for project implementation and the generation of emission reductions.

This determination report is based on the PDD version of February 2nd, 2007 (PDD version No. 4). This PDD version was submitted to TÜV SÜD on February 5th, 2007 and afterwards

published in a 30-day Global Stakeholder Consultation Process (GSP) from February 7th to March 8th on JI-SC website http://ji.unfccc.int/JI_Projects/Verification/PDD (Reference Number 0035) and in parallel on TÜV SÜD´s website for GSP www.netinform.de (links see chapter 4). No comments on this project have been received.

Studying the existing project documentation, it was obvious that the competence and capability of the validation team has to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14000, EMAS)
- Quality Assurance
- Operation, technologies and Processes in Coal Mines
- Heat and Electricity Generation in CHPs
- Baseline concepts
- Monitoring concepts
- Political, economical and technical random conditions in host country

According to these requirements TÜV SÜD has assembled a project team in accordance with the appointment rules of the TÜV certification body "Climate and Energy":

Thomas Kleiser is head of division CDM and JI at TÜV Industrie Service GmbH. In this position he is responsible for validation, verification and certifications processes for GHG mitigation projects as well as trainings for internal auditors. He has already conducted more than 90 validations/determinations and verifications of CDM and JI projects.

Olga Mikhaylyuk assisted as local expert for the determination of this project. Olga has received extensive training in the CDM and JI validation (determination) processes and is employed at the Moscow office of TÜV SÜD. She is also auditor for ISO 9000 and 14000.

Konrad Tausche was head of department of environmental measurement technique at the Frankfurt office of TÜV SÜD Industrie Service GmbH and works for "Carbon Management Service" in Munich since December 2006. He currently has the status of an GHG auditor within CMS. He has an academic background in physical and chemical engineering. An additional economic study was completed with the academic degree of a Master of Business Administration and Engineering (MBA and Eng.). In his experience of 14 years he verified a lot of different energy, chemical, steel and incineration plants, emissions control and mitigation projects. Currently he is an auditor trainee under JI but will receive the status of an auditor soon. He is also an expert in all kinds of gas utilisation and gas flaring.

Abhishek Goyal is also an auditor trainee and project manager for CDM projects at TÜV SÜD Industrie Service GmbH. Before joining the TÜV SÜD Industrie Service GmbH he has worked on development of PDDs and methodologies for several energy efficiency, renewable energy, and waste to energy projects. He has extensive experience in CDM.

Furthermore other experts of the Munich team of TÜV SÜD's Carbon Management Service have been partially involved in the project audits as experts/auditors (Dr. Albert Geiger as geologist) or trainees (Olga Maslova from Ukraine and Anna Peretykina from Russia).

The audit team covers following requirements:

- Knowledge of Kyoto Protocol and the Marrakech Accords (All)
- Environmental and Social Impact Assessment (All)
- Skills in environmental auditing (ISO 14000, EMAS) – (All)
- Quality Assurance (ALL)
- Operation, technologies and Processes in Coal Mines (Kleiser, Tausche, Goyal, Geiger, Peretykina, Maslova)
- Heat and Electricity Generation in CHPs (ALL)
- Utilisation of captured methane as fuel for trucks ((Kleiser, Tausche, Goyal)
- Baseline concepts (ALL)
- Monitoring concepts (ALL)
- Political, economical and technical random conditions in host country (Mikhaylyuk, Kleiser)

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body "climate and energy":

Werner Betzenbichler – Head of the Certification Body "Climate and Energy" and
Javier Castro – Deputy Head of the Certification Body "Climate and Energy"

1.4 GHG Project Description

The core of the proposed JI-project is the avoidance of methane emissions into the atmosphere at Leasing Company "the Coal Mine named after A.F. Zasyadko", further referred to the Zasyadko mine or simply the mine by using the methane for three different purposes.

These are:

- Utilization of the captured coal mine methane in CHP plants (24 cogeneration units in total) to **produce electricity** (I) **and heat** (II) for the own consumption and for selling to the national electricity grid or rather the municipal heat grid
- Utilization of the methane with more than 90 % methane content in automobile gas-filling compressor plants as **vehicle fuel (III)**

CMM fired combined heat and power modules or CHPs will supply electricity to the mine and provide the surplus to the public grid. Heat recovery systems will provide heat to the Mine and municipal boilers. The existing on-site heat-only boilers will be closed down whereas the municipal boiler houses will operate at a lower level.

By doing all this coal mine methane (as a waste product of the coal production) substitutes fossil fuels used for electricity and heat production in the mine itself and in the national electricity grid as well as in the municipal heat grid.

The starting date of the project activity is defined as date of starting first technical measures - this was March 1st, 2004.

The project shall generate so-called Early Credits in a first crediting period from March 1st, 2004 to December 31st, 2007. This first period is not part of the approval process for this project.

In a second crediting period from January 1st, 2008 until December 31st, 2012, corresponding with the First Commitment Period of the Kyoto Protocol, Emission Reductions Units will be generated. This crediting period is covered by the determination of this project. The project has four project participants. The Project Participant of the Host Country Ukraine is Lease Enterprise "Coal Mine named after A.F. Zasyadko" in Donetsk.

Three further project participants come from annex 1 countries ("sponsor countries"). These are:

- Marubeni Corporation from Tokyo, Japan
- VEMA S.A. from Geneva, Switzerland and
- Global Carbon B.V. from The Netherlands

Global Carbon B.V. in cooperation with the mine was responsible for the development of this JI project in Ukraine.

2 Methodology

In order to ensure transparency, a determination protocol was customised for the project, according to the Validation and Verification Manual (VVM). This was done – deviating from TÜV SÜD´s current proceeding to work already with project specific protocols – to have a consistent process also with the pre-determinations done by TÜV SÜD in 2005 where the VVM protocol served as working medium, too. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The determination protocol serves the following purposes:

- It organises, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent determination process where TÜV SÜD has documented how a particular requirement has been validated and the result of the determination.

The determination protocol consists for this project of three tables. The different columns in these tables are described in Figure 1.

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

Determination Protocol Table 1: Mandatory Requirements			
Requirement	***Reference***	***Conclusion***	***Cross reference***
The requirements the project must meet.	*Gives reference to the legislation or agreement where the requirement is found.*	*This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the determination report. **O** is used in case of an outstanding, currently not solvable issue, **AI** means Additional Information is required.*	*Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent determination process.*

Determination Protocol Table 2: Requirement checklist				
Checklist Question	***Reference***	***Means of verification (MoV)***	***Comment***	***Draft and/or Final Conclusion***
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in six different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	*Gives reference to documents where the answer to the checklist question or item is found.*	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*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.*	*This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification** or **Additional Information** is used when the independent entity has identified a need for further clarification or more information.*

Determination Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action and additional Information requests	***Ref. to checklist question in table 2***	***Summary of project owner response***	***Determination conclusion***
If the conclusions from the draft determination are either a Corrective Action Request or a Clarification or Additional Information Request, these should be listed in this section.	*Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification or Additional Information Request is explained.*	*The responses given by the Client or other project participants during the communications with the independent entity should be summarised in this section.*	*This section should summarise the independent entity's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".*

2.1 Review of Documents

The project participants submitted a PDD and additional background documents related to the project design and baseline. A review for all these documents has been performed in order to identify all issues for discussion during the follow-up interviews on-site and by phone or email.

2.2 Follow-up Interviews

The project already has a longer history. The project is a bundling of two separate JI projects too in one new JI project determined already two years ago by TÜV SÜD, too. There have been some adjustments and changes in the project planning of the two former projects due to some minor changes in the frame conditions, but the core of the projects remained unchanged.

In the context of the former determinations two on-site audits have been carried out from March 15th to March 16th, 2005 and April 27th to April 28th, 2005. Thus the mine is well-known to the responsible lead auditor and audit team. In the context of the new project additional visits (March 29th, 2007 and October 12th, 2007) – see information reference lists – have been carried out.

Asides these direct visits several questions could be clarified by e-mail conversation or on telephone.

The main topics of the interviews are summarised in Table 1. The complete and detailed list of all persons interviewed is enclosed in Appendix 2 (a-c) to this report. To make the process as transparent as possible also all available information from the two former determinations has been included in the information reference list (Annex-2a and -2b)

Table 1: Interview topics

Interviewed organisation	Interview topics
Lease enterprise "Coal Mine named after A.F. Zasyadko",	Project design, baseline, monitoring plan and procedures, environmental impacts, stakeholder comments, additionality, calibration of the measurement equipment, documentation, archiving of data, approval procedures, starting date of the project, crediting period, legal aspects of the project, questions of security , data flow, licenses, ownership
Project developer – Global Carbon B.V. (as well as the former project developers)	Baseline, monitoring plan, environmental impacts, stakeholder comments, approval of the projects, environmental impacts, stakeholder comments, national and sectoral policy; approval procedures, monitoring plan, responsibilities, archiving of data

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified in order to achieve a positive conclusion during the assessment process. Clarification Requests raised by TÜV SÜD have already been resolved in most parts in the answers to the draft determination protocol (submitted from TÜV SÜD to the client in March 2007) submitted by Global Carbon B.V. end of April 2007. A revised final PDD, dated March 27th, 2008 and a number of additional documents together with final answers have been submitted to the validator in order to provide the required and sufficient evidences.

To guarantee the transparency of the determination process, the concerns raised are and the response given are summarised in chapter 3 below. The whole process is documented in more detail in the final determination protocol in Annex 1.

The determination 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.

3 Determination Findings

In the following sections the findings of the final determination are stated. The determination findings for each determination subject are presented as follows:

1) The findings from the desk review of the project design document and the findings from interviews during the follow up visit are summarised. A more detailed record of these findings can be found in the Determination Protocol in Annex 1.

2) Where TÜV SÜD has identified issues that needed clarification or that represented a risk to the fulfilment of the project objectives, a Clarification or Corrective Action Request, respectively, has been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Annex 1. In total 4 Corrective Action Requests, 23 clarification requests and 4 open issues have been raised (identified).

3) Where Clarification and Corrective Action Requests have been issued, the response by the project participants to resolve these requests is summarized in the final determination report.

4) The draft final conclusions of the determination are presented consecutively.

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 foreseen technology does reflect 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. In total four parties are involved in the project - Ukraine as host country and Japan, The Netherlands and Switzerland as sponsor (buyer) countries.

Ukraine is a Party to the Kyoto Protocol since April 12th, 2004 and already has installed national procedures for the approval of JI projects. A Letter of Approval (LoA) for this project by Ukraine as host country already has been issued in 2005, but this was related to only one of the two former ("sub") - projects. Thus this LoA had to be renewed before uploading this project for final approval at JI-SC website. The approval was issued in a letter dated 14 March 2006.

Japan, Switzerland and The Netherlands have already submitted their LoA for this project in 2007.

For the future transfer of ERUs – the projects starts to produce ERUs with the beginning 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 (Lease Enterprise "Coal Mine named after O.F. Zasyadko" from Ukraine, Marubeni Corporation from Japan, VEMA S.A. from Switzerland and Global Carbon B.V. from The Netherlands) are clearly and correctly described in the PDD. But the role of the different project participants is still not transparently enough described.

The boundaries, the measures and the systems used in the project are described transparently and re-traceably enough in the PDD. But the contractual side is not described clear enough in the PDD (contract to feed in electricity and/or heat in national/municipal grids.

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

The nation laws/regulations in the coal mine sector are described too limited in the PDD. The relevance for this project is not worked out clear enough.

The project starting date is clearly defined in the PDD. Also the starting date of the JI crediting period is clearly defined (January 1st, 2008).

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:

The raised CARs/CRs in the following sub-chapters are only described in a summarized form, for more details see the attached protocol.

3.1.2 Issued CARs/CRs and Outstanding Issues

Outstanding Issue No. 1:
The Letters of Approval /Letter of No Objection from Switzerland and Japan are still missing. The Letter of Approval from Ukraine has to be renewed. All these three LoAs have to be submitted to the determinator before the project is uploaded for final approval at JI-SC website.

Response:
The Letters of Approval from Switzerland and Japan were submitted in year 2007; the LoA from Ukraine was renewed and issued on 14 March 2006.

Outstanding Issue No. 2:
Japan still has to indicate officially its Designated National Focal Point to the JI-SC. The DFP has to be officially indicated to JI-SC before the project is submitted for final approval.

Response:
Japan indicated officially its Designated National Focal Point to the JI-SC.

Outstanding Issue No. 3:

Switzerland and Japan still have not submitted their National Regulations and Procedures for the Approval of JI projects to the JI-SC. The National Procedures of all involved parties have to be made publicly available on JI-SC website before the project can be submitted to JI-SC for final approval.

Response:

Switzerland meanwhile has submitted its National Regulations and Procedures for the Approval of JI projects to the JI-SC and this document is publicly available on JI-SC website.

Japan also has submitted its National Regulations and Procedures for the Approval of JI projects to the JI-SC.
External link to the Japanese national guidelines and procedures for approving JI projects can be found on the JI- SC website.

Outstanding Issue No. 4:

Ukraine´s is under final preparation and approval currently. The question of a working registry becomes only relevant when the first ERUs of an approved JI track 2 project will be transferred to one of the partner countries.

Response:

This outstanding issue is out of the direct influence of the project participants and is not a direct requirement for project registration.

Clarification Request No. 1:

The role of the different project participants is not clear currently. Additional information should be submitted to the determinator.

Response:

The requested additional information has been submitted to the determinator.

Clarification Request No. 2:

The contractual situation should, so far as possible, already been included in the PDD. Furthermore the heat path of the project (supplying heat to the municipality) should be elaborated more detailed (contract, affected municipal boiler houses) as there is another JI project for local boiler houses under development in Donetsk currently.

Response:

The requested additional information has been submitted as far as possible to the determinator.

Clarification Request No. 3:

The description of the components and measures in this project is currently not elaborated clear enough.

Response:

The missing information was included in the revised PDD.

Corrective Action Request No. 1:

The spatial boundaries of the project should be worked out more transparently.

Response:

Corresponding information was included in the PDD.

Clarification Request No. 4:

The responsibilities and questions of training and maintenance should be worked out more detailed in this project.

Response:

Additional information was included in the revised PDD.

Clarification Request No. 22

The question of national environmental laws affecting in the coal mine sector and questions of project approval/licenses/ownership etc. should be included in the PDD.

Response:

A separate document describing the Environmental Impact Assessment has been submitted to the determinator.

3.1.3 Conclusion

The revised final PDD contains all required additional information and the requested corrections and clarifications concerning these general topics.

All given responses to the indicated CARs and CRs are resolving the relevant issues.

3.2 Baseline

3.2.1 Findings

The baseline methodology for this project is well-developed as an approved CDM-baseline methodology - ACM0008 - for this project is applied. There are some minor project specific adjustments of ACM0008 in this project but in principle the PDD follows strictly the guidance of ACM0008. All applicability criteria for ACM0008 have been worked out detailed and are fully assessed and applied in the final PDD. All (various) possible baseline alternatives have been plausibly and re-traceably elaborated and are transparently discussed in the PDD. PDD shows clearly that the final baseline scenario is the continuation of the current situation.

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 although only one of the two analysis´ needs to be applied. It is clearly highlighted in the PDD that this type of project still faces different significant barriers – mainly prevailing practice barriers and technological barriers. But also the investment analysis shows that the project is hardly realisable without JI. In this context it needs to be pointed out that the economic attractiveness to go for such a project might have been improved in the last two years due to changed frame conditions (gas supply by Russia became much more expensive in the last year) but nevertheless it needs to be remembered that the investment decision has already been made in early 2004 at a time when such a project was economically high risky and very unattractive. Thus there are no doubts concerning the additionality of this project. The on-site assessment also has given a focus on the environmental additionality and on the price risks for ERUs.

Nevertheless there are differences in the financial figures of the former two PDDs and this new combined PDD which need to be explained more transparently and plausible in the revised PDD.

There are some minor discrepancies in the information for the barrier analysis which have to be clarified.

The different baselines in this PDD - for electricity and heat supply as well as vehicle fuel substitution – have not been worked out clear and transparent enough in the first PDD. This needs to be improved in the final revised PDD.

Also risks in this project are not described completely and clearly enough.

It is not clear currently why some sources have been taken out from subsequent consideration in the PDD and others not. This has to be clarified.

No comparable projects currently exist in Ukraine or neighbouring countries.

Besides the mentioned points the baseline is correct, transparent and plausible and has been elaborated in a high quality. The same is valid for the proof of the additionality.

<u>Additional information on the applied CEF for the Ukrainian electricity grid:</u>

In the context of the determination the project developer submitted a new calculation of the carbon emission factor (CEF) of the Ukrainian electricity grid as well as the rationale for the chosen approach. The calculation does not completely follow the approved CDM methodology ACM0002 but also includes aspects from the former Dutch Erupt concept and takes into account the specific frame conditions of the Ukrainian electricity grid. The calculation as well as the argumentation given in the provided documents has been assessed by TÜV SÜD. Additionally TÜV SÜD visited the Ukrainian Ministry for Fuel and Energy to confirm the provided data and information independently and to discuss the specific frame conditions for electricity generation in Ukraine.

As final result TÜV SÜD can confirm that the calculation was carried out correctly and that the given reasons for the deviations from the standard ACM0002 approach can be accepted for Ukraine considering the country specific frame conditions for electricity generation. The CEF then finally was accepted by the Ukrainian DFP with issuing the LoA for the project.

A more detailed description of the approach as well as of TÜV SÜD´s assessment and confirmation of the approach is uploaded as attached documents wth the determination documents.

3.2.2 Issued CARs/CRs

Clarification Request No. 5:

The applicability criteria for ACM0008 have been worked out much more detailed and be substantiated more profound.

Response:

The requested clarifications have been included to the final revised PDD. For further information please see attached determination protocol. The most recent version – version No. 3 – of ACM0008 at the time of PDD development was applied for this project.

Clarification Request No. 6:

The different baselines - for heat, electricity, vehicle fuel change - have to be worked out more transparently, re-traceably and clearly.

Response:

The necessary clarification is given in the revised PDD.

Clarification Request No. 7:

The discrepancies in the financial figures in the former PDDs and in the current PDD need to be explained.

Response:

The necessary explanation is given in the final PDD and in the answers in the protocol.

Clarification Request No. 8:

The question of "barriers" have to be worked out more transparently! Existing unclarities and misleading information should be corrected/ clarified!

Response:

The necessary explanations are given in the final PDD and in the answers in the protocol.

Clarification Request No. 9:

The relevance of the two coal mine methane related decrees in Ukraine should be explained more detailed. Is flaring of CMM a topic of these decrees?

Response:

The necessary explanation and clarification is given in the revised PDD.

Clarification Request No. 10:

The information on the current situation relevant for baseline setting (status of boilers (at Zasyadko, municipal boilers, currently used fuels etc.) is only limited. This has to be improved.

Response:
The requested additional information has been included in the PDD and was added as annex to the PDD.

Clarification Request No. 11:
Most recent data should be used for the calculation of the CEF (carbon emission factor) of the Ukrainian electricity grid – supply with electricity and feeding in electricity.

Response:
The calculation has been updated. A new calculation was submitted to the determinator. The CEF for the Ukrainian grid was accepted and approved by the Ukrainian DFP by issuing a LoA for this project. Under JI track 2 the host countries are finally responsible for the approval of the carbon emission factors of their national grids.

Clarification Request No. 12:
The different risks for the project have to be worked out more detailed and should be summarized in a table in the PDD.

Response:
The risks are now discussed and described in section E of the PDD.

Clarification Request No. 14:
The question which sources have to be considered and which does not have needs to be worked out more transparently.

Response:
The PDD was updated and now follows strictly the guidance of ACM0008.

3.2.3 Conclusion

The given responses to the indicated CARs and CRs are resolving the relevant issues. The project fulfils the criteria on baselines as required for the approval of JI-projects. The Carbon emission factor(s) for the Ukrainian grid has been finally approved by the Ukrainian DFP as responsible body for this under JI Track 2.

3.3 Duration of the Project

The project starting date is defined as date of carrying out the first installations (in the context of the former two sub-projects). This was March 1st, 2004. The crediting period is separated in the time until 2007 (early credits) – this is not directly relevant for the approval of this JI project – and the five years JI-crediting period from 2008 – 2012 corresponding with the first commitment period under the Kyoto protocol.

The crediting period is in line with the regulations.

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

3.3.1 Findings

None.

3.3.2 Conclusions

The project fulfils the criteria for setting the crediting period/requirements for the lifetime of the equipment used in such a project.

3.4 Monitoring Plan

3.4.1 Findings

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

But there is currently confusion with ID numbers under the monitoring plan. In this point the PDD should follow more strictly the guidance of ACM0008. Furthermore the monitoring plan currently is not elaborated transparently and clearly enough. Information on type of the meters and location of the meters is missing.

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

Indicators for project emissions and baseline emissions have been defined and will be monitored.

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

Already (partially) trained personnel can work in this project which ensures the quality of the monitoring system. Nevertheless additional trainings will be necessary.

The current available monitoring plan does needs to be elaborated more detailed in some aspects and adjusted in some points.

3.4.2 Issued CARs/CRs

Corrective Action Request No.2:

ID numbers should be numbered continuously and utilised as described in the methodology to avoid any confusion.

Response:

The correction has been carried out as requested.

Corrective Action Request No.3:

The monitoring plan has to be elaborated much more detailed and adjusted in the mentioned points.

Response:

This was done as requested.

Clarification Request No. 15:

Internal project performance reviews should be part of the monitoring concept and should be integrated in an internal QM system if available.

Response:

Done in section D. Paragraph "Internal reviews and adjustment procedures ".

Clarification Request No. 17:

The training program with topics of the training for the new technologies (separately for each intervention) with responsibilities should be included in the PDD (monitoring plan).

Response:

Done in the paragraph "Employees' qualification". Corresponding information has been submitted as separate document.

Clarification Request No. 18:

Questions of procedures for emergency cases (breakdown of CHPs; technical problems at the gas filling stations, no need for heat and/or electricity or methane as fuel for automobiles) thinkable under this project should at least be discussed in the PDD.

Response:

Corresponding information has already been submitted (and will further be submitted) as separate document in the context of the verification of this project.

The procedure for emergency cases was included in final PDD.

Clarification Request No. 19:

The question of internal audits, assessment of project performance and, if necessary, corrective actions should be discussed in the revised PDD.

Response:

Done in section D. Paragraph "Internal reviews and adjustment procedures ".

3.4.3 Conclusion

With the revised PDD the monitoring plan fulfils all requirements for such type of projects. The discussed issues can be considered to be resolved.

3.5 Calculation of GHG Emissions

3.5.1 Findings

The project's spatial boundaries are widely correct 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.

Risks and uncertainties in the calculations should be considered at least verbally. The calculation of emission reductions should be separated in different paths: electricity, heat and vehicle fuel to have a more transparent overview on the emission reductions.

Emission reductions should be separated in early credits (as AAUs) for the years until 2008 and ERUs after 2008 until the end of 2012.

Leakage calculations are obviously not considered but this should be discussed more distinguished.

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

The lower value of the emission reductions for the first year of the crediting period is due to ongoing implementation of the last CHPs.

Additional Note:

In the final determination protocol the responses given by the Client or other project participants during the communications with the independent entity are related to the older version of the implemented methodology ACM0008- version 2. By contrast the final PDD describes version 3 of the methodology. The main difference between these two versions is specification of a tool which should be used to determine project emissions from flaring gases containing methane in version 3 against the use of default values in this case in version 2. These specific requirements related to flaring are not relevant as no methane is to be flared in the proposed JI project, so that use of an older version in determination protocol is acceptable.

3.5.2 Issued CARs/CRs

Clarification Request No. 16:
Leakage should be addressed and discussed more detailed in the revised PDD for each single intervention.

Response:
This has been done. Leakage is now described in line with ACM0008.

Clarification Request No. 20:
Risks and uncertainties for the GHG emission estimates should be described a little bit more detailed in the PDD.

Response:
Consideration of risks and uncertainties is inserted in section E.

Clarification Request No. 21:
For transparency reasons the project emissions of the different measures (electricity generation, heat generation and gas filling station) should be demonstrated in chapter E.

Response:
The different baseline, project and emission reductions per measure are given in section A.4.3. In the CO2 calculation sheet this overview is given in the sheet "overview".

Corrective Action Request No. 4:
The tables in chapter A.4.3.1 and E.5 should be separated as a mixture of AAUS and ERUs in one table might not be accepted by the JI-SC.

Response:
The tables have been split.

3.5.3 Conclusion

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

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

3.6 Environmental Impacts

3.6.1 Findings

The analysis of the environmental impacts is sufficient. The project will improve the current environmental situation. Trans-boundary impacts do not exist.

According to the Ukrainian law such projects need permissions for each stage of the projects. Therefore an assessment of environmental impacts of the project has to be conducted.

The results of the EIA have to be included in the PDD. Furthermore information of social aspects of the project has to be included in the PDD.

3.6.2 Issued CARs/CRs

Clarification Request No. 13:

To demonstrate the (mostly) positive social and environmental effects of this project under the Kyoto Protocol, social parameters (number of employees, number of trained persons) should be included in the monitoring plan (additional to the already included parameters to be monitored) (annual values).

Response:

Environmental and social parameters will be monitored or be available for the monitoring report.

Clarification Request No. 23:

The EIA should be added to the PDD as an annex, at least a summary.

Response:

A separate document EIA .pdf has been submitted to the determinator.

3.6.3 Conclusion

The project fulfils all prescribed requirements completely. Open issues have been clarified sufficiently.

3.7 Local stakeholder process

3.7.1 Findings

There are no project-specific requirements how to conduct a Local Stakeholder Process for this project.

Nevertheless 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.

3.7.2 Issued CARs/CRs

No such requests have been issued.

3.7.3 Conclusion

The project fulfils all requirements completely.

4 Comments by Parties, Stakeholders and NGOs

Background Information in advance:

The two previous Zasyadko PDDs in the phase when the project was designed in two separate PDDs have been published on TÜV SÜD´s website in 2005. No comments have been received.

The current, revised and bundled new PDD (a combination of the two old PDDs) – version 4 – has been published again via netinform under:

http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=2581&Ebene1_ID=26&Ebene2_ID=770&mode=1

and also on JI-Sc website under:

http://ji.unfccc.int/JI_Projects/DB/DA22OPURGI092XUFLIK0INB5GIYEGA/PublicPDD/GT00RJXHY4VGS7ZS16MCKJ28CMMRH2/view.html

for the 30 days Global Stakeholder Consultation Process as requested by JI-SC procedures on the period from February 7th, 2007 to March 8th, 2007.

Received Comments:

No comments have been received on this project (JI-project Ref. No. 0035).

5 Determination opinion

TÜV SÜD has performed a determination of "Utilization of Coal Mine Methane at the Coal Mine named after O.F. Zasyadko", JI project in Donetsk, Ukraine. The determination was performed on the basis of all currently valid and relevant JI criteria.

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.

All required Letters of Approval from the involved parties have been issued. All involved Parties have their Procedures and Guidelines for the JI projects already published on JI-SC website.

Thus in this point all requirements are fulfilled for uploading the project already for final approval at JI-SC.

If this can be confirmed finally it is our opinion that the project meets all relevant UNFCCC requirements for JI. TÜV SÜD thus will recommend this project for for registration in accordance with the rules of track 2 of the JI Supervisory committee.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 5 889 523 tons CO_{2e} (to be issued as ERUs) in the crediting period from 2008 - 2012 (First Commitment Period of the Kyoto Protocol), resulting in annual emission reductions of 1 177 905 tons CO_{2e}, represents a reasonable estimation using the assumptions given by the currently available project documents and additional background information.

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

Munich, 2008-03-27

Werner Betzenbichler

Head of Certification Body "Climate and Energy"

Munich, 2008-03-27

Thomas Kleiser

Responsible Project Manager

Determination Protocol

Table 1: Mandatory Requirements for Joint Implementation (JI) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
1. The project shall have the approval of the Parties involved	Kyoto Protocol Article 6.1 (a)	**Clarification Request No. 1, Outstanding Issue No. 1 (OI 1) and Outstanding Issue No. 2 (OI 2)**	The project (PDD version 4) is designed as a multi-lateral JI project with Ukraine as host country and Japan, Switzerland and The Netherlands as Investor (Buyer) Countries. **Clarification Request No.1 (CR 1):** Additional information should be given to explain in detail the role of all companies involved in the project (official participants and participants involved in the development of project documents).

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Question on "Availability of the LoAs": According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) all Letters of Approval (LoAs) for the project, from all four involved countries (Ukraine, Japan, The Netherlands and Switzerland) have to be presented to the audit team before starting the official registration process for this project at the UNFCCC Joint Implementation Supervisory Committee (JI-SC). **Outstanding Issue No. 1:** **a.)** The project already has received a formal Letter of Approval (LoA) / Letter of No

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Objection from Ukraine as host country. But this LoA was referring to a former PDD at a stage when to different and separate GHG mitigation projects at the same location, Zasyadko Coal Mine in Donetsk, had been designed. Meanwhile the two separate projects have been combined in one PDD. **Thus the Ukrainian LoA has to be renewed referring to the actual project described in the existing PDD.** Regional and state authorities so far involved in this project also have indicated their acceptance of the project.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			A required document for the renewal of the Ukrainian LoA will be the "Final Determination Report" including this Determination Protocol and an Information Reference List for the actual project. b.) The formal Letter of Approval from Japan as Sponsor country is also available. b.) **The formal Letters of Approval (LoA) from The Netherlands and Switzerland as involved investor countries are not available at this stage of the project**.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			A required document for the Dutch and the Swiss LoA also will be the "Draft Final Determination Report" including this Determination Protocol and an Information Reference List. **The LoAs from The Netherlands and Switzerland and the renewed Ukrainian LoA have to be submitted to the determinator before the project is re-submitted to JI-SC website for final approval (after a further Global Stakeholder Consultation Process of 45 days)** **<u>Question of Designated Focal Points (DFPs) for JI projects of the involved Parties:</u>** Ukraine, The Netherlands and Switzerland already have indicated their National Focal

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			responsible for the approval process of JI-projects (see link: http://ji.unfccc.int/JI_Parties/). **In case of Ukraine the Designated Focal Point is the:** **Ministry of Environmental Protection** 35 Urytsky Str., Kyiv, P.O. 03035 Ukraine Phone: +380 44 206 3100 Fax: +380 44 206 3107 Email: secr@menr.gov.ua The responsible person for the approval of JI projects is Mr. Heorhiy Veremiychyk (annotation: he is not officially indicated on UNFCCC´s website currently).

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			(see link: http://ji.unfccc.int/JI_Parties/Parties/index.html#Ukraine). **In case of Switzerland the DFP is:** **Federal Office for the Environment (FOEN)** **Climate Unit, Swissflex** CH-3003 Berne Switzerland **Mr. Yvan Keckeis** Phone: +41 31 324 7184 Fax: +41 31 323 0367 Email: swissflex@bafu.admin.ch The responsible person for the approval of JI projects is Mr. Yvan Keckeis.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			In case of the Netherlands the DFP is the: **Ministry of Economic Affairs** SenterNovem Catharijnesingel 59 P.O. Box 8242 3503 RE Utrecht Netherlands **Mr. Derk de Haan** Phone: +31 30 239 3413 Email: d.de.haan@senternovem.nl The responsible person is Mr. Derk de Haan. **Japan has – up February 2007 - not officially indicated its DFP for JI projects currently.** But this might only be a formal

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			act as in case of CDM projects Japan has already indicated its Designated National authorities for CDM projects under the Kyoto Protocol to the UNFCCC secretariat a long time ago. In case of Japan this authority for CDM is (see link: http://cdm.unfccc.int/DNA/view.html?CID=109) The Liaison Committee for the Utilization of the Kyoto Mechanisms Ministry of Foreign Affairs, Climate Change Division, International Cooperation Bureau, 2-2-1, Kasumigaseki, Chiyoda-ku, Tokyo 100-8919

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			kyomecha@mofa.go.jp Phone: (81-3) 5501-8245 Fax: (81-3) 5501-8244 together with: Cabinet Secretariat Assistant Chief Cabinet Secretary 1-6-1 Nagata-cho Chiyoda-ku, Tokyo 100-8968 i.kyomecha@cas.go.jp (i.kyomecha@cas.go.jp) Phone: (81-3) 3 3581 3688 Fax: (81-3) 3 3581 5601 **Japan has to indicate officially its DFP before the project can be uploaded for final approval at JI-SC website.**

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Guidelines and procedures for the Approval of JI projects in February 2007: Only the Netherlands and Ukraine currently have officially published their National Guidelines and Procedures for the Approval of JI projects, For Japan and Switzerland these documents are not available currently on JI-SC website. See link: http://ji.unfccc.int/JI_Parties and there under the different countries. **Outstanding Issue No. 2:** Japan should officially indicate its National Focal Point to the JI-SC.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) furthermore all involved parties in a JI project have to publish their National Regulations and Procedures for the Approval of JI projects. Thus these documents still need to be published by Switzerland and Japan before the project can be uploaded for the final approval at JI-SC website. **These two issues are currently out of the direct influence of the project participants.** **Final Conclusion concerning this mandatory requirement:** During the determination process Japan indicated its

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Designated National Focal Point for JI projects and Japan as well as Switzerland issued their National Guidelines and Procedures for JI projects – see under link: http://ji.unfccc.int/JI_Parties/index.html The project is in line with these guidelines and procedures.
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur	Kyoto Protocol Article 6.1 (b)	☑	Table 2, Section B.2
3. The sponsor Party shall not aquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7	Kyoto Protocol Article 6.1 (c)	☑	Article 5 requires "…Annex I Parties to having in place, no later than 2007, national systems

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			for the estimation of greenhouse gas emissions by sources and removals by sinks ". Article 7 requires "… Annex I Parties to submit annual green-house gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol". The current status for the involved three countries is the following: a.) Switzerland already has submitted its fourth national communications to UNFCCC see link: http://unfccc.int/resource/docs/natc/swinc4.pdf) as well as a progress report (see link:

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			http://unfccc.int/resource/docs/dpr/swi1.pdf), both dated on 2nd December 2005). b.) Japan also has submitted its fourth National communications (see link: http://unfccc.int/resource/docs/natc/japnc4.pdf) and a progress report (see link: http://unfccc.int/resource/docs/dpr/jpn1.pdf) to UNFCCC, both dated 6th February, 2006. c.) The Netherlands also have submitted their fourth national communications on December 22th, 2005 (see link:

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			http://unfccc.int/resource/docs/natc/netnc4.pdf) and a progress report at the same day, see link: http://unfccc.int/resource/docs/dpr/net1.pdf). d.) Ukraine also has submitted its second national communications on 27th June 2006 (see link: http://unfccc.int/resource/docs/natc/ukrnc2r.pdf) and a progress report on 2nd November 2006 (see link: http://unfccc.int/resource/docs/dpr/ukr1.pdf). Furthermore all four involved parties have already submitted

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			(see link: http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3734.php), Switzerland on 10th November 2006, Ukraine on 26th May 2006, The Netherlands on October 3rd, 2006 and Japan on 20th August 2006. A further important pre-condition for participating in the flexible mechanisms (CDM, JI and emissions trading) is the sub-mission of Initial Reports to the UNFCCC secretariat (see link: http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php). All involved parties already have submitted their Initial Reports to UNFCCC.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Thus all involved parties fulfil all their obligations as requested in case the project will run as second track JI project. It cannot be confirmed finally at this stage whether Japan, Switzerland, The Netherlands and Ukraine also will comply with all requirements to be fulfilled in case the project wants to run as second track JI project.
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3	Kyoto Protocol Article 6.1 (d)	☑	The project is additional to domestic actions for the purpose of meeting commitments under Article 3 in Japan and Switzerland.
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects	Marrakech Accords, JI Modalities, §20	**Outstanding Issue No. 3 (OI 3)**	The Ukrainian Government already has designated a national focal point (Joint Implementation Secretariat) - the contact data are:

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Ministry of Environmental Protection 35 Urytsky Str., Kyiv, P.O. 03035 Ukraine Phone: +380 44 206 3100 Fax: +380 44 206 3107 Email: secr@menr.gov.ua On December 29th, 2005 the Ukrainian government adopted national procedures for the consideration and approval of JI projects. These procedures had to be approved finally by the Cabinet of Ministers of Ukraine. On February 22nd, 2006 the Cabinet of Ministers in Ukraine approved the decree #206. This decree submitted the order of evaluation and implementation

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			of the JI projects in the frames of Kyoto protocol. See link: http://ji.unfccc.int/JI_Parties/Parties/Documents/Ukraine01.pdf The Netherlands also have published their National Guidelines and Procedures for the Approval of JI projects on April 13th, 2006. See Link: http://ji.unfccc.int/JI_Parties/Parties/index.html#Netherlands http://ji.unfccc.int/JI_Parties/Parties/Documents/Ukraine01.pdf. Neither Switzerland nor Japan have (current status) officially submitted their procedures for the approval of JI projects to UNFCC (JI-SC).

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Thus these procedures are not publicly available at the moment under http://ji.unfccc.int/JI_Parties/. **Outstanding Issue No. 3:** Two of the sponsor countries, Japan and Switzerland, still have finally to approve their national procedures for the approval of JI projects and submit these procedures for publication to JI-SC. This open issue is out of the influence of the project participants. **Final Conclusion concerning this mandatory requirement:** During the determination

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			process Japan as well as Switzerland issued their National Guidelines and Procedures for JI projects – see under link: http://ji.unfccc.int/JI_Parties/index.html The project is in line with these guidelines and procedures.
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	☑	Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	☑	This issue can not be answered concluding and is out of the influence of the project participants. Ukraine´s assigned amount is 100% of emissions in 1990. Currently, June 27th, 2006, Ukraine has submitted its

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Second National Communications within in the framework of the Kyoto Protocol to UNFCCC - see link (in Russian language): http://unfccc.int/resource/docs/natc/ukrnc2r.pdf The question can be assessed finally when the project starts generating ERUs (Emission Reduction Units) beginning with January 1st, 2008.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4	Marrakech Accords, JI Modalities, §21(d)/24	**OI 4**	**Outstanding Issue No. 4:** This issue can not be answered finally now as the national registry in Ukraine is still under development and not yet finalised completely and officially. This issue is out of the influence of the project owner and has to be solved before the first transfer of ERUs can be realized

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			(during the first Commitment Period of the Kyoto protocol in 2008). This mandatory requirement is out of influence for the successful determination of the project by the determining AIE and the later registration by JI-SC.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination	Marrakech Accords, JI Modalities, §31	☑	A project documentation consisting further information such as a baseline study, a monitorring plan, calculation of emissions reductions, information concerning environmental impacts of the project, concerning stakeholder consultations and concerning the financial background of the project has been submitted to TÜV SÜD mid of November

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			2006. At that time the submitted documentation was not considered as fully complete. Thus an updated PDD (Version 4) answering the raised Corrective and Clarification Requests was submitted to the determinator on February 5th, 2007 which was published in the Global Stakeholder Consultation Process immediately.
10. The project desing document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments	Marrakech Accords, JI Modalities, §32	☑	The two previous PDDs in the phase the project was designed in two separate PDDs have been published on TÜV SÜD´s website in 2005. The revised new PDD (a combination of the two old PDDs) –version 4 – has been published again via netinform under: http://www.netinform.de/KE/Weg

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			weiser/Guide2.aspx?ID=2581&Ebene1_ID=26&Ebene2_ID=770&mode=1 and also on JI-SC website under: http://ji.unfccc.int/JI_Projects/DB/DA22OPURGI092XUFLIK0INB5GIYEGA/PublicPDD/GT00RJXHY4VGS7ZS16MCKJ28CMMRH2/view.html for 30 days as requested by JI-SC procedures from February 7th, 2007 to March 8th, 2007. No comments have been received on this project. --- In case Track 1 procedure would be applied a re-publishing would depend on the regulations established and defined by the National Focal Point of the host

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			country.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out	Marrakech Accords, JI Modalities, §33(d)	See below	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project	Marrakech Accords, JI Modalities, Appendix B	See below	Table 2, Section B.2
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, JI Modalities, Appendix B	See below	Table 2, Section B.2

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
14. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	See below	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	See below	Table 2, Section D

Table 2: Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. General Description of Project Activity The project design is assessed.					
A.1. Project Boundaries Project boundaries are the limits and borders defining the GHG emission reduction project.					
A.1.1. Are the project's spatial (geographical) boundaries clearly defined?	1.C, 21.C and 22.C	DR, I	The purpose of the project is to collect methane currently ventilated in the atmosphere and thus to mitigate GHG emissions. The project comprises three measures (measure 1 and 2 in cogeneration plants): a. Utilise the methane for electricity generation for mine works and to feed in the surplus in the national grid. b. Utilise methane to produce heat currently and thus substitute the currently used coal- and gas-	**CAR 1, CR 2**	☑

* ☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

** MoV = Means of Verification, DR= Document Review, I= Interview

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			boilers in the mine and also to substitute external municipal boilers. c. Utilise additional collected gas as fuel for vehicles. The project reduces GHG emissions in the following way: • Carbon dioxide emission reductions by supplying the (national and local) grid with electricity and heat produced in high efficient combined heat and power plants (CHPs) burning coal mine methane and thus displacing electricity and heat produced much less efficient and mostly on basis of fossil fuels. • Reducing methane emissions by burning methane in the CHP plants instead of ventilating the coal mines methane in the atmosphere.		

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			• Reducing methane emissions from high-concentrated methane sources via utilization as transport fuel. In the absence of the project this amount of methane would be ventilated into the atmosphere, too. The project boundaries are clearly described in general, but not detailed enough documented with drawings/descriptions in the PDD. There are different production sites on the area of Zasyadko Coal Mine – Vostochnaya, Yakovlevskaya and Grigoryevskaya – which are included in/affected by the project. But neither the description in chapter A.4.1.4 nor the drawing in Figure 2 clarify re-traceably what sites are included in the project and what sites not included. In figure 2 additional sites are mentioned but it is not transparent in which way they are linked to the project. Furthermore the interconnections between the different		

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			sites internally in Zasyadko Coal Mine and the interconnections to external grids (electricity, heat, natural gas - import, export possible) are not clear. In the PDD also a site "Zentralnaya" is mentioned – in which way is this site linked to the project? Furthermore already in chapter A.2 the installations linked to the project activity (No. of CHP plants and location of installation etc.) should be mentioned. In the first two JI projects designed for coal mine methane utilisation at Zasyadko Coal Mine furthermore the utilisation of captured methane for feeding-in in the natural gas was part of the project measures to reduce GHG – it should be clarified why this measure is no longer included in the current project (not only with the footnote – as this could influence the additionality discussion		

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			for the project). Are new connection lines for heat and electricity (and even natural gas) necessary to conduct the project? **Corrective Action Request No. 1 (CAR 1):** Additional verbal and visual information has to be included in the PDD to give a transparent and re-traceable overview about the measures in the spatial project boundaries, connection to internal/external grids and number and locations of the different installations. **Clarification Request No. 2 (CR 2):** Part of the project is the feeding-in of electricity in the national grid and the feeding-in of heat in the existing municipal heat grid. It should be better described whether contracts with the affected external institutions/companies are already		

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			discussed and available in a written form and which boiler houses (name and number) of the municipal heat grid will be substituted (demolished?) through the project (as there is in parallel another JI project in the municipal heat sector in Donetsk and it needs to be ensured that a double-counting of efficiency measures can be excluded as result of a possible interaction between these projects.		
A.1.2. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?	1.C, 2.C, 3.C, 9.C - 13.C and 21.C - 22.C	DR, I	In principle, yes. But already at the beginning of the project (chapters in PDD under A) the type, number of components and facilities and the place for the locations (at which production site are the measures planned) should be included. Currently one has no complete overview about the systems after reading the general project description.	**CR 3**	☑

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			Clarification Request No. 3 (CR 3): The description of the projects components and measures should be revised and more concrete information should be added to the PDD. It should also be explained whether (why) a gas purification plant and/or a gas treatment plant is necessary and part of this project.		
A.2. Technology to be employed Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.					
A.2.1. Does the project design engineering reflect current good practices?	1.C - 4.C, 7.C.- 17.C and 21.C	DR, I	Yes. The technological measures under the project (degasification activities, pumping, purification, gas collecting tanks, equipment for flaring) and the envisaged installations of new equipment (CHPs, Gas	☑	☑

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	- 22.C		filling stations) reflects (even more than) current good practice in (underground) coal mining and exceeds in most parts the level of standards in the Ukrainian steel industry.		
A.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1.C - 4.C, 7.C.- 17.C and 21.C - 22.C	DR, I	Yes, the project uses - even more than - state of the art technology for all measures. The technology itself is an already approved technology especially in countries of the Western Europe, North America and Japan, but it is used for methane utilization from coal mines only in a few coal mines worldwide until now and therefore not widely spread. But the number of applications in the field of coal mine methane is increasing by degrees in the last two years. The new equipment leads, after finishing all the installations, to a much more efficient and a better ecological and economical treatment of methane appearing in the mining process.	☑	☑

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A.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1.C - 4.C, 7.C.- 17.C and 21.C - 22.C	DR, I	It is not likely that the project technology will be substituted by a more efficient technology during the crediting period as the technology applied is considered to be operational for at least 10 years given to the information on-site and in the PDD. Thus the lifetime of the new equipment will definitely exceed the crediting period. There is also no new, more efficient technology observably at the moment.	☑	☑
A.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1.C - 4.C, 7.C.- 17.C and 21.C - 22.C	DR, I	Yes. As new and/or much more efficient (in case of intervention 4 computerised) technologies are applied in all interventions extensive initial training, qualifications of employees and maintenance efforts are required in the first phase after the implementation of the interventions. For interventions 1 - 3 this process has already been finalised or still is ongoing, for intervention 4 just has started.	☑	☑

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			(see chapter A.4.2; also to be integrated in the monitoring plan)		
A.2.5. Does the project make provisions for meeting training and maintenance needs?	1.C - 4.C, 7.C.- 17.C and 21.C - 22.C	DR, I	Yes. According to the information given in the PDD (chapter A.4.2) and received during the on-site audit provisions for meeting training and maintenance needs are made. But additional information how these training and maintenance needs are fulfilled should be added to the PDD. **Clarification Request No. 4:** Additional information concerning the time schedule, measures, concerned employees (group), responsibilities for different levels of trainings (staff with different levels of skills, different measures in the project) should be included in the final revised PDD (in chapter D - monitoring) of March 27, 2008 (version 4.4). It should be described more detailed in the project documentation which company will	**CR 4**	☑

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			be responsible for the new equipment and which company will be responsible for the future training activities and the education of the staff. Which role has the supplier of the new equipment in this process? Which company is responsible for the maintenance? Which measures are planned for the training of the staff? Especially the partitioning of responsibility between the Austrian Company Jenbacher, the Ukrainian company Sinapse and the coal mine lease holding company itself should be described more detailed, also the required training in the period of handing over the responsibilities. Furthermore it should be described and shown, if possible already (on basis of already finalised installations and conducted trainings), in which way the trainings, the content of the trainings; success of the trainings and further necessary measures for achieve a better qualification of the personnel are documented.		

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B. Project Baseline The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. Baseline Methodology It is assessed whether the project applies an appropriate baseline methodology.					
B.1.1. Is the discussion and selection of the baseline methodology transparent?	1.C - 4.C, 7.C.- 17.C and 21.C - 22.C	DR, I	In principle, yes. The project applies the approved baseline (and monitoring) methodology ACM0008/ version 2: "Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat/or destruction by flaring". The methodology fits perfectly to this project type although the path "gas filling station" and using methane as fuel for cars has been included additionally which is possible under JI. The applicability criteria have been	**CR 5**	☑

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			considered and discussed according the description in the methodology but still not detailed enough. **<u>Clarification Request No. 5:</u>** The following aspects of the applicability criteria for this project have to be described/ discussed more detailed and confirmed/ proven with drawings/additional describing documents. 1.) No virgin coal-bed methane is extracted in the program for this project (please add drawings/ information with the chronological development of the methane capture program (measures over the last and in the next years) 2.) Please demonstrate (ideally also on basis of drawings) that no methane from already decom-missioned coal mines will be captured 3.) It needs to be demonstrated and		

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			ensured that the content of NMHCs is less than 1 % 4.) An additional statement should be added why pre-mining is not used or impossible at Zasyadko coal-mine 5.) Under Step 1 a reason should be given why not all possible options (viii) are applicable and thus not all are considered and discussed at Zasyadko coal mines 6.) Furthermore the option to realise the project without JI revenues should at least be mentioned and discussed (why this is not feasible) 7.) In step 3 "Formulation of the baseline alternatives" it should be clearly stated which alternatives would be feasible and which definitely can be excluded – this has not been done clearly for all alternatives. 8.) It should be demonstrated (on		

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			basis of the results in the past) that the ex-ante prognosis for methane capture is realistic and can be achieved. 9.) the average value of the methane content in the captured gases should be mentioned in the PDD (methane content and source of gas for CHPs; methane content and source of gas for gas filling stations (mixture?); source of gas for igniting.		
B.1.2. Does the baseline methodology specify data sources and assumptions?	1.C - 4.C, 7.C.- 17.C and 21.C - 22.C	DR, I	Yes, in most cases the data sources and assumptions are specified sufficiently and transparently. Necessary data for recalculating the baseline are inter alia the methane captured, methane utilised in the CHPs (both to produce heat and electricity), methane utilised as transport fuel, internal heat consumption at the different sites, heat sold to the municipality; internal electricity consumption and electricity sold to the	**CAR 2, CR 6, CR 7, CR 8, CR 9**	☑

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			grid, carbon emission factor of the Ukrainian grid, carbon emission factor of the municipal grid etc. But the system is described to limited and the data and proceeding to recalculate the baseline are not described transparent enough. **Corrective Action Request No. 2:** ID numbers should be numbered continuously and utilised as described in the methodology to avoid any confusion. **Clarification Request No. 6 (CR 6):** The following should be worked out (much) more transparently in the PDD (separately for each path and site). • Which is concrete the baseline scenario for the generation of heat utilised internally (boilers, utilised fuels, efficiency of the boilers etc.) and generation of heat in the		

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			municipal grid – please add verbally some information. Is there information available on the internal heat consumption in baseline scenario for the different sites? • For electricity the baseline scenario is clear nevertheless should be highlighted a little bit more. Has there been already an internal electricity source (generation) at Zasyadko coal mine in front of the project? • Baseline scenario for vehicle fuel - which fuels do the cars/trucks use currently? Will more trucks be operated in the future? Will only trucks/cars from Zasyadko Coal Mine use the fuel from the gas filling stations or is a publicly accessible gas filling station for external trucks (municipal or private) planned?		

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			• ID number 3 $BE_{use, y}$ seems to be not correctly described in the PDD as supply to gas grid is not part of this project! • Is there any information available concerning the efficiency of methane destruction when used as fuel for vehicles – 100 %? • ID number 6 is not clearly described – what means "Emissions from end use …"? Please describe verbally in the chapter where this ID number first appears. **Clarification Request No. 7 (CR 7):** There is a bid discrepancy between the information on NPV and IRR in the last submitted business plan in the PDD developed by the Austrian Energy Agency and the information in the current PDD. This should be explained (the values are lower in the current PDD).		

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			The data basis of parameters used for the current calculation is not clear (are prices for electricity, natural gas from 2006). Sources for information: • Discount rate of 16 % • Increase of electricity, heat and gas prices = 5 % per year should be added. • It should be better explained why degasification and vacuum pumps were excluded. • How can the revenues from selling electricity, heat and fuel be calculated as far as no final contracts/experiences on this are available? • In which way have costs for installations of gas treatment plants/purification plants been considered in the calculations? • On page 16 the base case in the "Sensitivity Analysis" is 9 %, on		

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			page 18 the value is 10 %. Please check and correct this. As the description of the Benchmark analysis currently is very short including additional information in the PDD could be very helpful. **<u>Clarification Request No. 8 (CR 8):</u>** Step 3: Barrier Analysis: There is a big difference between the amount of CMM generated in all Ukrainian coal mines in 1999 (41.9 Mio m^3) and the value for Zasyadko solely in 2002 (164 Mio m^3). Which is the reason therefore? As the newly-installed natural gas fired equipment made in Germany has not expired its lifetime the question arises whether the sale of this equipment not should be considered in the financial calculations? Furthermore – to which purpose was this equipment installed and is this considered in the baseline? The elimination of this new boiler house		

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			can hardly be considered as a barrier to the project – please explain. The description of technological barriers describes that the existing five boiler houses to some part already work on captured methane – has this not to be subtracted in the calculations? Is this already considered? **<u>Clarification Request No. 9 (CR 9):</u>** It should be more highlighted that the two relevant decrees -(Decree of the President of Ukraine as of 16th of January 2002 # 26/2002 and Governmental Decree as of 6th of July 2002 # 939) does not mention or at least not require the flaring of captured Coal Mine Methane.		
B.1.3. Does the baseline methodology sufficiently describe the underlying rationale for the algorithm/formulae used to determine baseline	1.C, 2.C, 3.C,	DR, I	Yes, the baseline methodology follows the given descriptions, algorithms and formulae of the methodology.	☑	☑

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emissions (e.g. marginal vs. average, etc.)	7.C - 19.C and 21.C - 22.C		But CR 6 and CR 8 should be solved and clarified as they directly refer to the application of the given formulae and influence the baseline setting.		
B.1.4. Does the baseline methodology specify types of variables used (e.g. fuels used, fuel consumption rates, etc)?	1.C - 4.C, 7.C - 19.C and 21.C - 22.C	DR, I	Yes, all types of variables and the units are clearly described in chapter D.1.1.4, but not completely. **Clarification Request No. 10.** The concept for re-calculating the baseline emissions is not completely well thought-out at the moment. The information on fuels used and efficiency of existing boilers to produce heat at Zasyadko Coal Mine is missing currently and should be mentioned in the PDD. Furthermore the information on municipal boiler houses which should be shut down as result of the project should be	**CR 10**	☑

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			mentioned (question: gas or coal fired boiler houses; efficiency of the boiler house?).		
B.1.5. Does the baseline methodology specify the spatial level of data (local, regional, national)?	1.C - 6.C, 7.C – 22.C	DR, I	Yes, the spatial level of the data is clearly described. It is explained where the data come from and/or whether they are measured locally or come from national sources. The data level regarding installation specific parameters and operation modes is plant specific whereas the emissions factors are derived from "Operational Guidelines for PDD´s" for the Erupt Tender (which refers to IPCC values) and IPCC values. All spatial levels are hence considered to be appropriate. But there is one open issue. **Clarification Request No. 11:** The source of the carbon emission factor for the Ukrainian electricity grid has to be clearly identified in the PDD – chapter D.1.1.4. It should be explained why the	**CR 11**	☑

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			carbon emission factor from "Ministry of Economic Affairs of the Netherlands, 2004, "Operational Guidelines for Project Design Documents of Joint Implementation Projects" and why this is a conservative approach. If more recent and conservative annual values for the carbon emission factor of the Ukrainian grid are available these values should be used. Most recent sources (national values; IPCC 2006) should be used the net calorific value of natural gas and for the carbon emission factor of natural gas in Ukraine.		
B.2. Baseline Determination The choice of baseline will be validated with focus on whether the baseline is a likely scenario, whether the project itself is not a likely baseline scenario, and whether the baseline is complete and transparent.					
B.2.1. Is the application of the methodology and the discussion and determination of the chosen baseline transparent?	3.C, 5.C, 7.C,	DR, I	Yes, under the pre-condition that open points, inconsistencies and requests for adding further information mentioned CR 5	☑	☑

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	9.C - 11.C as well as 21.C - 22.C		– CR 8 and CR 10 are solved. The discussion and determination of the chosen baseline is transparent and reflects the situation as required due to existing local conditions and legislation as well as the policy of the project owner regarding independent energy and heat supply.		
B.2.2. Has the baseline been determined using conservative assumptions where possible?	19.C - 22.C	DR, I	This cannot be confirmed finally yet as some corrections and clarifications are required in the CARs and CRs above. Thus it is not completely clear whether the baseline concept for heat generation and supply of fuel for transport purposes are set up in a conservative way. Using the carbon emission factors for the Ukrainian electricity grid from ERUPT tender on the other side is a conservative approach under the current conditions for electricity generation in Ukraine. Under the pre-condition that the CRs/CARs mentioned above can be solved the baseline setting can be	☑	☑

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			considered as conservative.		
B.2.3. Has the baseline been established on a project-specific basis?	9.C – 11.C and 21.C – 22.C	DR, I	Yes, in cases where approaches from ACM008 could not be applied a project-specific approach for the baseline was used. This is related to the gas filling stations which supply captured methane as fuel for automobiles.	☑	☑
B.2.4. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	1.C - 3.C; 12.C – 19.C and 21.C – 22.C	DR, I	Yes, under the pre-condition that additional information on the laws related to methane capturing and ventilating can be provided and will be included in the final revised PDD. The baseline scenario furthermore correctly takes into account development of fuel and electricity prices in Ukraine, capital availability in Ukraine, the current situation concerning applied technologies in the Ukrainian mining sector as well as Ukrainian environmental requirements (legislation).	☑	☑

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B.2.5. Is the baseline determination compatible with the available data?	1.C - 3.C; 12.C – 19.C and 21.C – 22.C	DR, I	Yes. Sources for all data used for the baseline determination are clearly, re-traceably, transparently and plausible given in the PDD or in the attached documents. The applied data in most cases already could be confirmed during the on-site audits in 2005.	☑	☑
B.2.6. Does the selected baseline represent a likely scenario in the absence of the project?	1.C - 3.C; 12.C – 19.C and 21.C – 22.C	DR, I	Yes, it is clearly, re-traceably, transparently and plausible described in the PDD and attached documents that the selected baseline would be the most likely scenario in the absence of the project. The baseline scenario conforms to all legal requirements and the prevailing practice in the Ukrainian energy and heat generation sector.	☑	☑
B.2.7. Is it demonstrated that the project activity itself is not a likely baseline scenario (e.g. through (a) a flow-chart or series of questions that lead to a	1.C - 3.C; 12.C	DR, I	Yes, under the pre-condition that the CRs/CARs mentioned above can be solved finally.	☑	☑

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narrowing of potential baseline options, (b) a qualitative or quantitative assessment of different potential options and an indication of why the non-project option is more likely, (c) a qualitative or quantitative assessment of one or more barriers facing the proposed project activity or (d) an indication that the project type is not common practice in the proposed area of implementation, and not required by a Party's legislation/regulations)?	– 19.C and 21.C – 22.C		Besides this it is demonstrated clearly and transparently by using the "Tool for the demonstration of additionality (version 02)" ("additionality tool" issued by the UNFCCC-EB for checking the additionality of CDM projects) to demonstrate that the project activity is not a likely baseline scenario. Potential baseline options have been described and discussed following the methodology (annotation: alternatives also should be considered and verbally discussed from a more measure specific perspective (generation of electricity, generation of heat; fuel supple for trucks). But all alternatives are clearly elaborated and described in the PDD, clear reasons why the chosen baseline as non-project option is the most likely baseline are given in the PDD and also different barriers for the project have been plausibly described in the PDD. Its transparently proven that the project		

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			scenario is: • Not common practice and not required by legislation in Ukraine • There are risks and barriers for the project and difficult frame conditions for financing such a project in Ukraine • There are no wide spread know-ledge, experiences and applications of these technologies currently in the mining sector in Ukraine. Thus it is transparently and re-traceably shown in the PDD and corresponding documents and calculation sheets that the project scenario is not a realistic potential baseline scenario for this project.		
B.2.8. Have the major risks to the baseline been identified?	1.C - 3.C; 12.C	DR, I	No; risks are verbally described but not highlighted as required in the PDD. A table should be included in chapter B	**CR 12**	☑

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	– 19.C and 21.C – 22.C		highlighting and evaluating the different risks for this project. **Clarification Request No. 12:** The different risks for the project should be summarized and evaluated in a separate table.		
B.2.9. Is all literature and sources clearly referenced?	1.C - 3.C; 12.C – 19.C and 21.C – 22.C	DR, I	Mostly yes in form of footnotes. It should be considered whether a separate annex listing the different documents to establish the baseline could be added also as separate annex to the PDD to make the process more descriptive and transparent.	☑	☑
B.3. Additionality					
B.3.1. Is the discussion of how emission reductions are achieved by the project scenario in comparison to the identified baseline scenario provided in a transparent manner?	23.C	DR, I	The discussion of how emission reductions are achieved by the project scenario in comparison to the baseline scenario was provided in a transparent manner in	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Section A.4.3. of the PDD		
B.3.2. In case of using calculation models in order to demonstrate emission reductions: Are all formulae and input data based on provable records?	21.C 23.C 24.C 25.C 31.C	DR, I	Yes, the emission reductions calculations are provided to the determinator as excel-sheets. All input data was verified during the on-site visits.	☑	☑
B.3.3. Does the PDD clearly demonstrate the additionality?	23.C 32.C	DR, I	According to Annex 1 (Additionality) of the JISC "Guidance on criteria for baseline setting and monitoring", any method for proving additionality approved by the CDM Executive Board can be used for demonstrating additionality of the JI project. This PDD clearly demonstrate the additionality by using the "Tool for demonstration and assessment of additionality" (version 4)	☑	☑
B.3.4. In case of using the additionality tool: Are all steps followed in a transparent and provable	23.C 32.C	DR, I	All steps of the additionality tool were followed in a transparent manner.	☑	☑

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manner?			Additional information regarding the investment analysis was submitted to the determinator as excel-sheets.		
B.3.5. Does the discussion sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	1.C 2.C 5.C 8.C 14.C 15.C 16.C 18.C 19.C 20.C 21.C 23.C 24.C 25.C 32.C	DR, I	Yes, the discussion take into account all relevant national and sectoral policies and macro-economic trends, that among others include: • Ukrainian law "On the ecological examination" • National safety regulations • Instructions mentioned in Section F of the PDD	☑	☑
B.3.6. Is the approach for demonstrating additionality	23.C	DR,	The used tool for demonstration of the	☑	☑

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provided by the most recent (or still applicable) methodology correctly applied?		I	additionality is correctly applied, all steps were carried out except the step 1, which is ignored in accordance with the implemented methodology ACM0008 At the step 2 the benchmark analysis was used At the step 3 the list of barriers is provided includes investment barriers, technological barriers, and barriers due to prevailing practice. The existence and significance of these barriers is transparently evidenced. Step 4 is common practice analysis. Step 5 shows the impact of JI revenues. Additional information was submitted to the determinator.		
B.3.7. Are other proofs than anecdotal evidence for all assumptions and statements used by the additionality discussion?	23.C 31.C 32.C	DR, I	Yes, all proofs were submitted to the determinator.	☑	☑
B.4. Project Boundary					
B.4.1. Are all emission related to the baseline scenario clearly identified and described in a	23.C	DR, I	Yes, in Section B.3. Table 10 all sources of emissions in the baseline scenario are	☑	☑

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complete manner?	31.C		summarized and described in detail. The baseline emissions include methane as a result of venting and CO_2 from the grid electricity generation and captive power and/ or heat and vehicle fuel use.		
B.4.2. In case of grid connected electricity projects: Is the relevant grid correctly identified due to the JISC guidance and the underlying methodology?	23.C, 33.C – 38.C	DR, I	The related grid – national electricity grid of Ukraine – was correctly identified. ACM0008 refers to ACM0002. In the context of the determination of the project the project developer presented a calculation of the Ukrainian grid factor (for electricity feed-in and supply) following widely the guidance and requirements of ACM0002, but taking over also aspects of the former ERUPT concept to calculate grid emission factors. This concept was pre-assessed and agreed by TÜV SÜD in keen contact with the Ukrainian Ministry for Fuel and Energy (responsible for giving access to all requested data and information). The calculations as well as the results of TÜV SÜD´s pre-assessment have been submitted to the Ukrainian DFP for final	☑	☑

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			approval as - under JI- the setting of the definition/agreement on National grid factors falls in the duty/responsibility of the DFPs. The Ukrainian DFP confirmed the calculations/the grid factor with issuing a LoA for this project and allowing that this factors now can be used as official grid factor(s) for the nationwide Ukrainian grid in all JI projects. This was already done by other project developers in the last month. A transparent description of the concept is given in Annex 2 to the PDD. The final statement of TÜV SÜD – signed after receipt of the Ukrainian LoA – is attached as separated document to the determination protocol (see also documents in the Information Reference List). The calculation has been carried out correctly and the chosen approach is considered as justified and applicable under the specific frame conditions of electricity generation in the Ukrainian grid.		

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B.4.3. Are all emission related to the project scenario clearly identified and described in a complete manner?	23.C 31.C	DR, I	Yes, in Section B.3. Table 11 all emissions related to the project scenario are summarized and described. The project emissions include CO_2 from the methane and NMHC destruction, on-site fuel consumption and as fugitive emissions of unburned methane.	☑	☑
B.4.4. Are all emission related to leakage clearly identified and described in a complete manner?	23.C	DR, I	In accordance with the implemented methodology ACM0008 four possible leakages should be taken into account: 1. Displacement of baseline thermal energy uses. However, there is no CMM being used for thermal demand under the baseline scenario- no leakage has to be taken into account 2. Impact of the JI project on coal production. However, there is no impact as degasification activities are independent from the JI project- no leakage- no leakage has to be taken into account 3. CBM drainage from outside de-	☑	☑

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			stressed zone. However, there is no CBM involved- no leakage has to be taken into account 4. Impact of the JI project on coal prises- the JI project as such does not influence coal production, so its impact on coal prises is unlikely. Conclusion: there is no leakage in the project.		
B.5. Detailed Baseline Information					
B.5.1. Is there any indication of a date when determine the baseline?	23.C	DR, I	In the initially submitted PDD no information on date of completing baseline was given. In the final PDD March 27th, 2008 is given as date of final completion of the baseline study. This baseline was finally assessed and is considered to be complete and correct.	☑	☑
B.5.2. Is this in consistency with the time line of the PDD history?	23.C	DR, I	Date is consistent with the time line of the PDD history.	☑	☑
B.5.3. Is all data required provided in a complete	23.C	DR,	Yes, all data regarding the baseline is	☑	☑

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manner by annex 2 of the PDD?		I	provided completely by Annex 2 of the PDD		
B.5.4. Is all data given in compliance with the methodological approach?	23.C	DR, I	Yes. The data are in compliance with ein implemented methodology ACM0008 as well as the chosen specific approach for the calculation of the Ukrainian Carbon Emission factor. This specific approach does not follow exactly the approved CDM methodology ACM0002 – but the deviations are deemed acceptable by the AIE considering the specific frame conditions of the electricity grid/electricity generation in Ukraine.	☑	☑
B.5.5. Is all data evidence by official data sources or replicable records?	21.C 24.C 25.C	DR, I	Yes. The evidences for all data were submitted to the determinator during the on-site visit.	☑	☑
B.5.6. Is the vintage of the baseline data correct?	23.C	DR, I	The vintage of the baseline data is correct Considering the specific situation of the electricity sector in Ukraine - as JI country - the baseline emission factor was calculated not fully following ACM0002 from CDM, but also taking over aspects of the Dutch	☑	☑

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			ERUPT Tender approach for calculating carbon emission factors for national grids. Data of the years 2001 – 2005 were used to calculate the factors – for the period 2004 – 2012. The calculations were submitted to the determinator and pre-assessed. With issuing the LoA the Ukrainian DFP as responsible national body for agreement on the national grid emission factors in JI countries confirmed the correctness of the concept and calculations.		
C. Duration of the Project/ Crediting Period It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	21.C and 22.C	DR, I	Yes, the starting date of the project is defined as January 1st, 2004 when the first technical measures were conducted on-site for the future implementation of the project (at that time as part of the initial two projects).	☑	☑

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			In January 2006 commissioning of first CHPs started at Vostochnaya site (see page 20 of the final PDD). The operational lifetime is defined as "No less than 10 years" which is considered as a plausible and even a conservative assumption for this type of projects.		
C.1.2. Is the project's crediting time clearly defined?	21.C and 22.C	DR, I	Yes, the crediting period starts at January 1st, 2008 (coinciding with the first commitment period of the Kyoto protocol) and will last until December 31st, 2006.	☑	☑

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D. Monitoring Plan The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.					
D.1. Monitoring Methodology It is assessed whether the project applies an appropriate baseline methodology.					
D.1.1. Does the monitoring methodology reflect good monitoring and reporting practices?	6.C – 11.C	DR, I	Mostly yes, but not in all aspects. The monitoring methodology has been developed following the approved monitoring methodology ACM0008. Furthermore a project specific approach was used to include the aspect of gas-filling stations in the monitoring concept. But the monitoring concept currently is not transparent, clear and retraceable enough. It cannot yet be confirmed that this monitoring plan is sufficient to acquire all necessary data to calculate project and baseline emissions and thus the generated emission reductions.	**CAR 3**	☑

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			The PDD should be adjusted in order to demonstrate the monitoring concept more detailed. All measuring points for the project should be illustrated via a simplified schema (flowchart), information should be given concerning calibration frequencies and measurement accuracy, information concerning responsibilities and further information concerning procedures in emergency cases. The procedure and different steps of the reporting process should be explained. Furthermore the following aspects should be considered/discussed and/or included in the monitoring plan: • ID numbers should be used following the methodology • What happens in case of maintenance of CHPs – is surplus methane then utilised at other		

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			CHPs, or just flared or ventilated in the atmosphere – and is this considered in the monitoring plan • Currently it is not clear in which way the re-calculation of the baseline will be carried out for heat generation? Fuel used in existing boilers and their efficiency (internal at Zasyadko coal mine as well as boilers proably substituted in the municipal grid should be included in the monitoring plan) • Is the internal electricity consumption of the new equipment monitored and considered (already subtracted) in the monitored values? In which way is the electricity consumption of compressor stations considered in the monitoring plan or why is this consumption considered as not linked to the project? The installation of compressor stations		

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			is directly linked to the project – or not? • Is methane (source) used for igniting monitored and will it be subtracted in the later calculations? • Are losses in purification and/or gas treatment plants included in the monitoring plan? Reason to exclude this? • Are leakage effects in the systems (transport form source to utilisation) to be considered? • For electricity: Is there an internal meter (on Zasyadko´s side) and an external meter (in the ownership of the Ukrainian electricity grid)? Which meter will be monitored? Are cross-checks possible? • It should be highlighted which parameters are calculated ex-ante and which have to be (re-)calculated ex-post. A separate table illustrating this considering all parameters to be		

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			monitored would be helpful in this point. • A drawing showing where the meters are installed (separately for heat, electricity and gas filling stations) would lead to a better understanding of the monitoring concept. • The baseline in case of the gas filling stations is not clear – are emissions in the baseline scenario (besides methane) to be recalculated or excluded in a conservative approach? • Calibration requirements and procedures, responsible companies (third parties) in Ukraine and relevance for the project are not mentioned detailed enough in the monitoring plan. • The realisation of all measurements should be explained: In table 12 further parameters to be monitored		

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			are mentioned but it is not described how and where and with which frequency these parameters are monitored. • Level of accuracy and uncertainty for each monitored parameter should be added (information under D.2 is considered to be not sufficient) • As some measures are already implemented it should be checked whether the currently monitored parameters would allow a calculation of baseline and project emissions. • Chapter D.3 is too limited currently. The data flow, frequencies of data collection and internal reporting and reviews should be added to the monitoring plan. • Will there be a project specific manual for the monitoring process • Will the monitoring plan be integrated in the existing ISO 9000 management system		

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			• Training and maintenance are not directly addressed in the monitoring plan –is this also monitored? • A short description to the mentioned automatic control system (function and responsible person) by DBT should be added as an annex to the PDD. **Corrective Action Request No. 3** The monitoring plan has to be elaborated much more detailed and adjusted in the above mentioned points.		
D.1.2. Is the selected monitoring methodology supported by the monitored and recorded data?	1.C - 3.C; 6.C - 19.C and 21.C – 22.C	DR, I	Yes. The monitoring methodology is supported by data which can and will be recorded by Zasyadko	☑	☑

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D.1.3. Are the monitoring provisions in the monitoring methodology consistent with the project boundaries in the baseline study?	21.C – 22.C	DR, I	Yes. The monitoring concept and provisions are in line with the project boundaries. But see CAR 3.	**CAR 3**	☑
D.1.4. Have any needs for monitoring outside the project boundaries been evaluated and if so, included as applicable?		Dr, I	There are no direct needs to monitor data outside of the project boundaries (under the pre-condition that the revision and updating of the monitoring plan will not identify additional parameters outside of the project boundaries). **Clarification Request No. 13:** To demonstrate the (mostly) positive social and environmental effects of this project under the Kyoto protocol additional to the already included parameters to be monitored social parameters (number of employees, number of trained persons) should be included in the monitoring plan (annual values). It furthermore should be checked whether the parameter "Carbon emission factor of	**CR 13**	☑

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			the Ukrainian Grid" should be included inn the monitoring plan, too in case new studies will be available which provide more concrete and recent data than the Dutch Erupt Guidelines.		
D.1.5. Does the monitoring methodology allow for conservative, transparent, accurate and complete calculation of the ex post GHG emissions?	1.C, 13.C - 22.C	DR, I	Yes, under the pre-conditions that the CARs and CRs mentioned above can be solved finally and completely.	☑	☑
D.1.6. Is the monitoring methodology clear and user friendly?	1.C, 2.C, 13.C - 22.C	DR, I	Yes, under the assumption that all requested clarifications and corrections will be considered and included in the monitoring plan.	☑	☑
D.1.7. Does the methodology mitigate possible monitoring errors or uncertainties addressed?	1.C, 2.C, 13.C - 22.C	DR, I	Partially yes, but see CAR 3 and comment below. In the actual PDD version no sufficient information (on a parameter-specific basis) is available concerning monitoring errors and uncertainties. All requested information defined from EB 23 – see link:	**CAR 3**	☑

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			http://cdm.unfccc.int/Reference/Guidclarif/EB23_%20para%2024_guidance_monitoring.pdf should be included in a revised PDD version.		
D.2. Monitoring of Project Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project boundary during the crediting period?	1.C –- 22.C	DR, I	Yes, under the pre-condition that CAR 3 can be solved.	☑	☑
D.2.2. Are the choices of project GHG indicators reasonable?	21.C and 22.C	Dr, I	In principle yes. But in chapter B.3 in the tables 8 and 9 GHG sources are included and excluded. In case of sources of project emissions additional information should be included to explain and demonstrate clearly and re-traceably in the revised PDD why some sources are excluded (for example: own	**CR 14**	☑

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			electricity consumptions; NMHC content; fugitive methane emissions; accidental methane release (is there maintenance included?) **Clarification Request No. 14:** A short argumentation and evidence should be added to the PDD (tables 8 and 9) why some sources are excluded from further consideration.		
D.2.3. Will it be possible to monitor / measure the specified project GHG indicators?	21.C and 22.C	DR, I	Yes. The specified GHG indicators can all be monitored/ measured.	☑	☑
D.2.4. Will the indicators enable comparison of project data and performance over time?	21.C and 22.C	DR, I	Yes, the parameters will allow to assess the performance of the project aver time. **Clarification Request No. 15:** Internal project performance reviews should be part of the monitoring concept and should be integrated in an internal QM	**CR 15**	☑

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			system if available.		
D.3. Monitoring of Leakage It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	21.C and 22.C	DR, I	No. It is described in the PDD that leakage has not been identified and needs not to be considered in the monitoring plan. But this single statement is not sufficient enough and to thin. **<u>Clarification Request No. 16:</u>** Leakage should be addressed and discussed more detailed in the revised PDD for each single intervention.	**CR 16**	☑

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D.3.2. Have relevant indicators for GHG leakage been included?	21.C and 22.C	DR, I	No, but see comment above.	**CR 16**	☑
D.3.3. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	21.C and 22.C	DR, I	No, but see comment above.	**CR 16**	☑
D.3.4. Will it be possible to monitor the specified GHG leakage indicators?	21.C and 22.C	DR, I	No, but see comment above.	**CR 16**	☑
D.4. Monitoring of Baseline Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline emissions during the crediting period?	21.C and 22.C	Dr, I	In principle, yes, but see comments under CAR 1, 3 and in CRs 5, 6 above.	**CAR 1, 3 and CR 5, 6**	☑
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	21.C and	DR, I	Yes. But see comment above..	**CAR 1, 3**	☑

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	22.C			and CR 5, 6	
D.4.3. Will it be possible to monitor the specified baseline indicators?	21.C and 22.C	Dr, I	Yes, it will be possible to monitor the specified baseline indicators.	☑	☑
D.5. Monitoring of Environmental Impacts It is checked that choices of indicators are reasonable and complete to monitor sustainable performance over time.					
D.5.1. Does the monitoring plan provide for the collection and archiving of relevant data on environmental impacts?	21.C and 22.C	DR, I	No, currently not. As there are no negative environmental effects to be expected in this project a monitoring of data demonstrating environmental impacts of the project is deemed to be not necessary. Nevertheless it should be checked on a voluntary basis whether the environmental benefits of the project should be mentioned in the monitoring reports and could be demonstrated on basis of fees to be paid for air pollution.	☑	☑

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D.5.2. Will it be possible to monitor the specified environmental impact indicators?	21.C and 22.C	DR, I	This is not necessary in this project – see comments above!	☑	☑
D.6. Project Management Planning It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
D.6.1. Is the authority and responsibility of project management clearly described?	21.C and 22.C	DR, I	The description currently is not detailed and clear enough. See comments under CAR 3 and CR 15	**CAR 3 and CR 15**	☑
D.6.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	21.C and 22.C	Dr, I	No, see CAR 3 and CR 15.	**CAR 3 and CR 15**	☑
D.6.3. Are procedures identified for training of monitoring personnel?	21.C and 22.C	Dr, I	Yes. This issue is addressed in the PDD, but not detailed enough. **Clarification Request No. 17:** The training program with topics of the	**CR 17**	☑

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			training for the new technologies (separately for each intervention) with responsibilities should be included in the PDD (monitoring plan).		
D.6.4. Are procedures identified for emergency preparedness where emergencies can result in unintended emissions?	21.C and 22.C	Dr, I	No. **Clarification Request No. 18:** Questions of procedures for emergency cases (breakdown of CHPs; technical problems at the gas filling stations, no need for heat and/or electricity or methane as fuel for automobiles) thinkable under this project should at least be discussed in the PDD.	**CR 18**	☑
D.6.5. Are procedures identified for calibration of monitoring equipment?	21.C and 22.C	Dr, I	No, see comments under CAR 5.	**CAR 3**	☑
D.6.6. Are procedures identified for maintenance of monitoring equipment and installations?	21.C and 22.C	DR, I	Yes, but not detailed enough and to short – see comments under CAR 3.	**CAR 3 CR 17**	☑
D.6.7. Are procedures identified for monitoring, measurements and reporting?	21.C and 22.C	DR, I	Not detailed enough; see also comments under CAR 3.	**CAR 3**	☑

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D.6.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	21.C and 22.C	DR, I	Not detailed enough: see also comments under CAR 3.	**CAR 3**	☑
D.6.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	21.C and 22.C	DR, I	This issue is addressed, but not detailed enough. See also comments under CAR 5. Information how to deal with data adjustment and monitoring errors should be discussed and described in the PDD.	**CAR 3**	☑
D.6.10. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	21.C and 22.C	DR, I	No. **Clarification Request No. 19:** The question of internal audits, assessment of project performance and, if necessary, corrective actions should be discussed in the revised PDD.	**CR 19**	☑
D.6.11. Are procedures identified for project performance reviews?	21.C and 22.C	DR, I	See comments under CR 17.	**CR 18**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.6.12. Are procedures identified for corrective actions?	21.C and 22.C	DR, I	See comments under CR 17.	**CR 18**	☑
E. Calculation of GHG Emissions by Source It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. Predicted Project GHG Emissions The validation of predicted project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect GHG emissions captured in the project design?	21.C and 22.C	DR, I	Yes, in chapter B.3 of the PDD – but see CR 14.	**CR 14**	☑
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	21.C and 22.C	Dr, I	Yes, under the pre-condition that the CRs and CARs mentioned above can be solved.	☑	☑
E.1.3. Have conservative assumptions been used to	21.C	Dr, I	Yes, under the pre-condition that all neces-	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
calculate project GHG emissions?	and 22.C		sary clarifications and corrections will be solved as requested.		
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	21.C and 22.C	Dr, I	Not detailed enough. **Clarification Request No. 20:** But risks and uncertainties for the GHG emission estimates should be described a little bit more detailed in the PDD.	**CR 20**	☑
E.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?	21.C and 22.C	Dr, I	In principle yes, but see CR 14. .	**CR 14**	☑
E.2. Leakage Effect Emissions It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.					
E.2.1. Are potential leakage effects beyond the chosen	21.C	Dr, I	See CR 16.	**CR 16**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
project boundaries properly identified?	and 22.C				
E.2.2. Have these leakage effects been properly accounted for in calculations?	21.C and 22.C	Dr, I	See CR 16.	**CR 16**	☑
E.2.3. Does the methodology for calculating leakage comply with existing good practice?	21.C and 22.C	Dr, I	See CR 16.	**CR 16**	☑
E.2.4. Are the calculations documented in a complete and transparent manner?	21.C and 22.C	Dr, I	See CR 16.	**CR 16**	☑
E.2.5. Have conservative assumptions been used when calculating leakage?	21.C and 22.C	Dr, I	See CR 16.	**CR 16**	☑
E.2.6. Are uncertainties in the leakage estimates properly addressed?	21.C and 22.C	Dr, I	See CR 16.	**CR 16**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.3. Baseline Emissions The validation of predicted baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as reference for baseline emissions?	21.C and 22.C	Dr, I	Yes, all data will be based on historic values, which so far as possible have been verified during the validation process. But see CAR 3.	☑	☑
E.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?	21.C and 22.C	Dr, I	Yes – but see also CAR 1.	☑	☑
E.3.3. Are the GHG calculations documented in a complete and transparent manner?	21.C and 22.C	Dr, I	Yes, under the pre-condition that all issued CARs and CRs are solved.	☑	☑
E.3.4. Have conservative assumptions been used when calculating baseline emissions?	21.C and 22.C	Dr, I	Yes; under the pre-condition that all CRs and CARs will be solved.	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.3.5. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	21.C and 22.C	Dr, I	Yes, under the pre-condition that the CARs and CRs mentioned above are all solved.	☑	☑
E.3.6. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?	21.C and 22.C	Dr, I	Yes, under the pre-condition that the CARs and CRs mentioned above are all solved.	☑	☑
E.4. Emission Reductions Validation of baseline GHG emissions will focus on methodology transparency and completeness in emission estimations.					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	21.C and 22.C	Dr, I	Yes. But the calculations might need to be corrected taking into consideration the CARs and CRs mentioned above. **Clarification Request No. 21:** For transparency reasons the project emissions of the different measures (electricity generation, heat generation and gas filling station should be demonstrated in	**CR 21**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			chapter E). **Corrective Action Nr. 4:** The tables in chapter A.4.3.4 and E.5 should be separated as a mixture of AAUS and ERUs in one table might not be accepted by the JI-SC.		
F. Environmental Impacts Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the validator.					
F.1.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	1.C – 2.C, 4.C, 5.C, 14.C – 17.C and 21.C - 22.C	Dr, I	Environmental impacts of the project are described in chapters F1 and F 2 of the PDD. The description per se is good and detailed enough. Nevertheless the description should be elaborated a little bit more concrete and process related. **Clarification Request No. 22:** There should be a clearer link to national environmental laws/regulations in the PDD. It should be declared why and which	**CR 22**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			environmental assessments need to be conducted according to the national law to get the approval/licenses/permits for this projects and which are the requirements in front of the implementation of the project, during construction phase and after project implementation.		
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1.C – 2.C, 4.C, 5.C, 14.C – 17.C and 21.C - 22.C	Dr, I	Yes. **<u>Clarification Request No. 23 (CR 23):</u>** The EIA should be added to the PDD as an annex, at least a summary.	**CR 23**	☑
F.1.3. Will the project create any adverse environmental effects?	1.C – 2.C, 4.C,	Dr, I	No, but this should be explained, reasoned and highlighted a little bit more in the PDD – see also comment above.	☑	☑

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	5.C, 14.C – 17.C and 21.C - 22.C				
F.1.4. Are trans-boundary environmental impacts considered in the analysis?	1.C – 2.C, 4.C, 5.C, 14.C – 17.C and 21.C - 22.C	Dr, I	No, the distance of the project to boundaries of neighboured countries is too far to generate trans-boundary impacts of this project.	☑	☑
F.1.5. Have identified environmental impacts been addressed in the project design?	1.C – 2.C,	Dr, I	So far as necessary, yes.	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	4.C, 5.C, 14.C – 17.C and 21.C - 22.C				
F.1.6. Does the project comply with environmental legislation in the host country?	1.C – 2.C, 4.C, 5.C, 14.C – 17.C and 21.C - 22.C	Dr, I	Yes.	☑	☑

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Table 3: Resolution of Corrective Action and Clarification Requests

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Clarification Request No.1 (CR 1): Additional information should be given to explain in detail the role of all companies involved in the project (official participants and participants involved in the development of project documents).	Table 1, Requirement No. 1	The different Project Participants mentioned in chapter A.3 will either purchase the Emission Reductions or will make sure that the Emission Reductions can be transferred to the different jurisdictions of future buyers of the reductions (Currently not all buyers are known at this stage).	The given information is considered as sufficient. ☑
Outstanding Issue No. 1: According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) **Letters of Approval** (LoAs) for the project from all involved countries	Table 1, Requirement No. 1	LoAs from all participating countries have been submitted to the determinator.	The LOAs from all participating countries are available and refer to the present JI project "Utilization of Coal Mine Methane at the Coal Mine named after O.F. Zasyadko". The LOAs are designed correctly and fulfill all basic requirements for

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
(Ukraine, The Netherlands, Switzerland and Japan), referring to the final revised PDD version for this project and fulfilling the standard requirements for LoAs (mentioning the voluntary participation in the project; the contribution to sustainable development in host courtry and that the Kyoto protocol is signed by all involved parties) with information on title, participants and date of issuing the LoA have to be presented to the audit team before starting the official registration process for this project at the UNFCCC Joint Implementation Supervisory Committee (JI-SC).			design and content of LoAs for JI projects. Where necessary written and confirmed translations of the original LoAs have been provided and are available together with the documents themselves. Minor changes in the final PDD for uploading – among other reasons also induced by an accident in Zasyadko coal mine in November 2007 – due not affect the general setting and concept of the project and are thus deemed not to be relevant for the validity of the existing LoAs – which have been issued in an earlier stage. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Outstanding Issue No. 2: Japan still has to indicate officially its Designated National Focal Point to the JI-SC.	Table 1, Requirement No. 1	Meanwhile Japan has indicated its Designated National Focal Point for JI projects to JI-SC.	☑
Outstanding Issue No. 3: Two of the sponsor countries involved in this project, Japan and Switzerland, still have to approve finally their national procedures for the approval of JI projects and submit these procedures for publication to JI-SC.	Table 1, Requirement No. 4	Meanwhile Japan and Switzerland have approved their national procedures for JI projects and submitted to JI-SC. The information is available at JI-SC website.	☑ The project is in line with all national guidelines and procedures of involved parties.

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Outstanding Issue No. 4: The national registry in Ukraine is still under development and not yet finalised completely and officially. This issue needs to be solved before ERUs or AAUs can be transferred to the sponsor countries.	Table 1, Requirement No. 8	This issue is out of the direct influence of the project participants and does not affect the registration process of the project.	The answer is correct. The question of National Registry – currently prepared by Ukraine – does not affect the approval process for this project and only will become relevant when the first ERUs will be transferred. ☑
Corrective Action Request No. 1 (CAR 1): Additional verbal and visual information has to be included in the PDD to give a transparent and re-traceable overview about the measures in the spatial project boundaries, connection to	A.1.1	Corresponding information has been added. Please refer section A.4.2 and the figures with the project boundaries for the baseline and project scenario in section B.3.	The included additional information and given clarifications/corrections in the revised PDD is considered as sufficient. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
internal/external grids and number and locations of the different instal-lations.			
Clarification Request No. 2: Part of the project is the feeding-in of electricity in the national grid and the feeding-in of heat in the existing municipal heat grid. It should be better described whether contracts with the affected external institutions/ companies are already discussed and available in a written form and which boiler houses (name and number) of the municipal heat grid will be substituted (demolished?) through the project (as there is in	A.1.1	There are no contracts yet for: • Supply of electricity to the grid. Supply to the grid will only occur in 2008. Therefore it is too early to conclude contracts. • Supply of heat to the DH system. Supply will only occur in 2208. Therefore it is too early to conclude contracts. At the DH system the Ionina boiler house, the block 287 boiler house and the block 518 boiler house will not be demolished but operate at a lower activity level. See section D.	The answer is deemed sufficient. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
parallel another JI project in the municipal heat sector in Donetsk and it needs to be ensured that a double-counting of efficiency measures can be excluded as result of a possible interaction between these projects.		• Double counting with the other project will be avoided as the actual boiler efficiency of these three boilers will be monitored. An explanation has been added in section D and annex 2.	
Clarification Request No. 3 (CR 3): The description of the projects components and measures should be revised and more concrete information should be added to the PDD. It should also be explained whether (why) a gas purification plant and/or a gas treatment plant is necessary and part of this project.	A.1.1	More clear description has been added to the PDD.	The included additional information in the revised PDD is considered as sufficient. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Clarification Request No. 4: Additional information concerning the time schedule, measures, concerned employees (group), responsibilities for different levels of trainings (staff with different levels of skills, different measures in the project) should be included in the final revised PDD (in chapter D - monitoring). It should be described more detailed in the project documentation which company will be responsible for the new equipment and which company will be responsible for the future training activities and the education of the staff. Which role has the	A.2.5	Some additional information has been added. More detailed information will be submitted to the determinator in a separate document.	The requested information has been submitted to the determinator and is considered as sufficient. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
supplier of the new equipment in this process? Which company is responsible for the maintenance? Which measures are planned for the training of the staff? Especially the partitioning of responsibility between the Austrian Company Jenbacher, the Ukrainian company Sinapse and the coal mine lease holding company itself should be described more detailed, also the required training in the period of handing over the responsibilities. Furthermore it should be described and shown, if possible already (on basis of already finalised installations and conducted trainings), in which way the trainings,		Reports on implemented training of the staff have been described in the PDD in brief. More detailed information has been submitted to the determinator in a separate document.	

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
the content of the trainings; success of the trainings and further necessary measures for achieve a better qualification of the personnel are documented.			

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Clarification Request No. 5: The following aspects of the applicability criteria for this project have to be described/ discussed more detailed and confirmed/ proven with drawings/additional describing documents. 1. No virgin coal-bed methane is extracted in the program for this project (please add drawings/ information with the chronological development of the methane capture program (measures over the last and in the next years). 2. Please demonstrate (ideally also on basis of drawings) that no methane from already decom-missioned coal mines will be captured. 3. It needs to be demon-strated and ensured that the content of NMHCs is less than 1 %	B.1.1	Corresponding information has been added to section B. The full description of the degasification plan will be submitted in a separate document. 1. The CMM extracted from the underground boreholes is only pre-mining CMM that is extracted just before and during the mining process. The CMM from the goaf wells is also pre-mining CMM. In a separate document the programme for goaf well expansion in connection with mining activities has been included. In the PDD an extract of a scientific article show that (virgin) CBM can not extracted due to low permeability of the coal layers. 2. The CMM extracted is only pre-mining CMM that is extracted just before and during the mining process as has been more explained in the PDD. 3. Tests for NMHC will be submitted as separate document. Nevertheless NMCS will be monitored and analyzed on a quarterly basis. See section D.	The requested additional information has been submitted to the determinator and is considered as sufficient. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Corrective Action Request No. 2: ID numbers should be numbered continuously and utilised as described in the methodology to avoid any confusion.	B.1.2	Done	☑
Clarification Request No. 6 (CR 6): The following should be worked out (much) more transparently in the PDD (separately for each path and site). • Which is concrete the baseline scenario for the generation of heat utilised internally (boilers, utilised	B.1.1	• Done. The heat generated, delivered and consumed will be clearly measured as described in the monitoring plan. The emission factors of heat is described in annex 2 and given in the CO2	The requested clarifications are included in the revised PDD. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
fuels, efficiency of the boilers etc.) and generation of heat in the municipal grid – please add verbally some information. Is there information available on the internal heat consumption in baseline scenario for the different sites? • For electricity the baseline scenario is clear nevertheless should be highlighted a little bit more. Has there been already an internal electricity source (generation) at Zasyadko coal mine in front of the		calculation sheet • No internal electricity source is available at Zasyadko. A remark has been included in the PDD.	

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
project? • Baseline scenario for vehicle fuel - which fuels do the cars/trucks use currently? Will more trucks be operated in the future? Will only trucks/cars from Zasyadko Coal Mine use the fuel from the gas filling stations or is a publicly accessible gas filling station for external trucks (municipal or private) planned? • ID number 3 $BE_{use, y}$ seems to be not correctly described in the PDD as supply to gas grid is not part of this project!		• Trucks operate on diesel and gasoline (50/50).Only trucks of the mine will be filled with CMM. • The description has been corrected • The efficiency of methane destruction is	

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
• Is there any information available concerning the efficiency of methane destruction when used as fuel for vehicles – 100 %? • ID number 6 is not clearly described – what means "Emissions from end use …"? Please describe verbally in the chapter where this ID number first appears.		taken as 98.5% in accordance with IPCC default value and ACM0008. The vehicle engine efficiency is unknown. To be conservative 100% has been taken. • The description has been made more clear	
Clarification Request No. 7 (CR 7): There is a big discrepancy between the information on NPV and IRR in the last submitted business plan in the PDD developed by the Austrian	B.1.1		The requested clarifications are included in the revised PDD. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Energy Agency and the information in the current PDD. This should be explained (the values are lower in the current PDD). The data basis of parameters used for the current calculation is not clear (are prices for electricity, natural gas from 2006). Sources for information: • Discount rate of 16 % • Increase of electricity, heat and gas prices = 5 % per year should be added. • It should be better explained why degasification and vacuum pumps were excluded.		Source for information: • The source of the discount rate is the Ministry of Economy which issues for each year the preferred discount rate to be used in financial calculations of investment projects. In the year 2003 this figure was 16% • In Ukraine it is impossible to predict increase of energy prices. The prices	

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
• How can the revenues from selling electricity, heat and fuel be calculated as far as no final contracts/experiences on this are available? • In which way have costs for installations of gas treatment plants/purification plants been considered in the calculations? • On page 16 the base case in the "Sensitivity Analysis" is 9 %, on page 18 the value is 10 %. Please check and correct this.		were taken at the moment of decision of project (ordering of CHP equipment). The annual increase of 5% was based on the average inflation rate of the past years. • Degasification equipment and vacuum pumps are outside the project boundary as discussed in section B.1. Therefore they are excluded from the financial calculations as this investment is made independently from the JI project. • The energy prices were based on the costs at 2003 for Zasyadko as given in supply contracts • The cost of the gas treatment plant has been included in the investment costs. No purification plants is part of the	

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
As the description of the Benchmark analysis currently is very short including additional information in the PDD could be very helpful.		project yet as this part of the project has been postponed. • Corrected Additional information was added.	
<u>Clarification Request No. 8 (CR 8):</u> Step 3: Barrier Analysis: There is a big difference between the amount of CMM generated in all Ukrainian coal mines in 1999 (41.9 Mio m^3) and the value for Zasyadko solely in 2002 (164 Mio m^3). Which is the reason therefore? As the newly-installed natural gas fired equipment made in Germany	B.1.1	The amount mentioned for all mines is 41,981 bln m3, not 41.9 mln m3 The boilers did not expire technical lifetime. However, the financial value of boilers that	The requested clarifications and corrections are included in the revised PDD. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
has not expired its lifetime the question arises whether the sale of this equipment not should be considered in the financial calculations? Furthermore – to which purpose was this equipment installed and is this considered in the baseline?		have been in operation is close to zero. Therefore the sale of boilers has not been taken into account.	
The elimination of this new boiler house can hardly be considered as a barrier to the project – please explain.		True. The barrier analysis has been adjusted	
The description of technological barriers describes that the existing five boiler houses to some part already work on captured methane –		A pilot project was indeed implemented to utilize CMM. Due to safety reason this pilot project was cancelled as described in the	

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
has this not to be subtracted in the calculations? Is this already considered?		PDD. Therefore in the baseline scenario no utilization of CMM in boilers is foreseen.	
Clarification Request No. 9 (CR 9): It should be more highlighted that the two relevant decrees -(Decree of the President of Ukraine as of 16th of January 2002 # 26/2002 and Governmental Decree as of 6th of July 2002 # 939) does not mention or at least not require the flaring of captured Coal Mine Methane.	B.1.1	Done	The requested clarifications are included in the revised PDD. ☑
Clarification Request No. 10. The concept for re-calculating the baseline emissions is not completely well thought-out at the moment.	B.1.4		The requested clarifications are included in the revised PDD. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
The information on fuels used and efficiency of existing boilers to produce heat at Zasyadko Coal Mine is missing currently and should be mentioned in the PDD. Furthermore the information on municipal boiler houses which should be shut down as result of the project should be mentioned (question: gas or coal fired boiler houses; efficiency of the boiler house?).		The information on fuel used and boiler efficiency has been described in annex 2 and is given in the CO2 calculation sheet as well. . The actual efficiency and fuel used will be monitored. A description has been added in section D	
Clarification Request No. 11: The source of the carbon emission factor for the Ukrainian electricity grid has to be clearly identified in the PDD – chapter D.1.1.4. It should be	B.1.5	A new baseline for the Ukrainian electricity grid has been added in annex 2.	The requested clarifications and the results of the updated baseline for the Ukrainian electricity grid are included in the revised PDD. ☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
explained why the carbon emission factor from "Ministry of Economic Affairs of the Netherlands, 2004, "Operational Guidelines for Project Design Documents of Joint Implementation Projects" and why this is a conservative approach. If more recent and conservative annual values for the carbon emission factor of the Ukrainian grid are available these values should be used. Most recent sources (national values; IPCC 2006) should be used the net calorific value of natural gas and for the carbon emission factor of natural gas in Ukraine.			The calculated factors can be accepted (for feeding in electricity in the grid and supply with electricity from the grid) can be accepted under the following pre-condition: It still has to be confirmed finally that no dispatch data for electricity generation are available on an hourly basis in Ukraine. In case such data would be available the submitted calculation needs to be updated.

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
Clarification Request No. 12: The different risks for the project should be summarized and evaluated in a separate table.	B.2.8	The risks have been discussed in section E.	The requested clarifications are included in the revised PDD. ☑
Corrective Action Request No. 3 The monitoring plan has to be elaborated much more detailed and adjusted in the above mentioned points (for Details see under D.1.2)	D.1.2	Done.	The requested corrections and clarifications are solved with the updated monitoring plan. ☑
Clarification Request No. 13: To demonstrate the (mostly) positive social and environmental effects of this project under the Kyoto protocol additional to the already included parameters to be monitored social	D.1.4	The social and environmental effects will be included in the monitoring report. A general remark has been added in section D.	☑

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
parameters (number of employees, number of trained persons) should be included in the monitoring plan (annual values). It furthermore should be checked whether the parameter "Carbon emission factor of the Ukrainian Grid" should be included inn the monitoring plan, too in case new studies will be available which provide more concrete and recent data than the Dutch Erupt Guidelines.		A new electricity baseline has been added. There is no need anymore to check for a new CEF of the Ukrainian grid.	
Clarification Request No. 14: A short argumentation and evidence should be added to the PDD (tables	D.2.2	Done. Exclusions are in line with ACM0008.	The determinator accepts the clarifications. ☑

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
8 and 9) why some sources are excluded from further consideration			
Clarification Request No. 15: Internal project performance reviews should be part of the monitoring concept and should be integrated in an internal QM system if available.	D.2.4	Done in section D. Paragraph "Internal reviews and adjustment procedures "	The determinator accepts the clarifications. ☑
Clarification Request No. 16: Leakage should be addressed and discussed more detailed in the revised PDD for each single intervention.	D.3.1	Done. Leakage has been described in line with ACM0008.	The determinator accepts the clarifications. ☑
Clarification Request No. 17: The training program with topics of the training for the new technologies	D.6.3	Done in the paragraph "Employees' qualification "	The determinator accepts the clarifications. ☑

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
(separately for each intervention) with responsibilities should be included in the PDD (monitoring plan).		Corresponding information will be submitted as separate document.	
Clarification Request No. 18: Questions of procedures for emergency cases (breakdown of CHPs; technical problems at the gas filling stations, no need for heat and/or electricity or methane as fuel for automobiles) thinkable under this project should at least be discussed in the PDD.	D.6.4	Corresponding information will be submitted as separate document.	☑
Clarification Request No. 19: The question of internal audits,	D.6.10	Done in section D. Paragraph "Internal reviews and adjustment	☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
assessment of project performance and, if necessary, corrective actions should be discussed in the revised PDD.		procedures "	
Clarification Request No. 20: But risks and uncertainties for the GHG emission estimates should be described a little bit more detailed in the PDD.	E.1.4	Inserted in section E.	☑
Clarification Request No. 21: For transparency reasons the project emissions of the different measures (electricity generation, heat generation and gas filling station should be demonstrated in chapter	E.4.1	The different baseline, project and emission reductions per measure are given in section A.4.3. In the CO2 calculation sheet this overview is given in the sheet "overview".	☑

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Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
E).			
Corrective Action Nr. 4: The tables in chapter A.4.3.4 and E.5 should be separated as a mixture of AAUS and ERUs in one table might not be accepted by the JI-SC.	E.4.1	Done. Tables have been split.	☑
Clarification Request No. 22: There should be a clearer link to national environmental laws/regulations in the PDD. It should be declared why and which environmental assessments need to be conducted according to the national law to get the	F.1.1	Refer please to separate document. EIA.pdf	☑

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Determination conclusion
approval/licenses/permits for this projects and which are the requirements in front of the implementation of the project, during construction phase and after project implementation.			
Clarification Request No. 23 (CR 23): The EIA should be added to the PDD as an annex, at least a summary.	F.1.2	Refer please to submitted separate document. EIA .pdf	☑

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Annex 2 of 2

Information Reference Lists

Reference No.	Document or Type of Information
1. A	On-site interview with the project owner conducted on March 15th, 2005 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Boris Skvortsov — Technical Interpreter, Translator Interviewed persons: Marat Latypov — RusCarbon (project developer) Boris Bokiy — Deputy General Director of Zasyadko Cola Mine Svetlana Tsoruvnja — Interpreter, Zasyadko Coal Mine Alois Geiselhofer — PDD Developer, Austrian Energy Agency Elvira Lutter — PDD Developer, Austrian Energy Agency Roman Muratov — Deputy General Director on Economical Issues Igor Kouznetsov — Chief Energy Manager of Zasyadko Coal Mine Juliya Zalesnova — Head of Plan-Economic Department Zasyadko
2. A	On-site interview with the project owner conducted on March 16th, 2005 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Boris Skvortsov — Technical Interpreter, Translator Interviewed persons: Marat Latypov — RusCarbon (project developer) Boris Bokiy — Deputy General Director of Zasyadko Cola Mine Svetlana Tsoruvnja — Interpreter, Zasyadko Coal Mine Alois Geiselhofer — PDD Developer, Austrian Energy Agency Elvira Lutter — PDD Developer, Austrian Energy Agency Michael Sattler — PDD Developer, Austrian Energy Agency Igor Kouznetsov — Chief Energy Manager of Zasyadko Coal Mine Juliya Zalesnova — Head of Plan-Economic Department Zasyadko

Reference No.	Document or Type of Information
3. A	Plant Visit with direct on-site interviews on March 16th, 2005 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Boris Skvortsov — Technical Interpreter, Translator Interviewed persons: Marat Latypov — RusCarbon (project developer) Boris Bokiy — Deputy General Director of Zasyadko Cola Mine Svetlana Tsoruvnja — Interpreter, Zasyadko Coal Mine Alois Geiselhofer — PDD Developer, Austrian Energy Agency Elvira Lutter — PDD Developer, Austrian Energy Agency Michael Sattler — PDD Developer, Austrian Energy Agency Margarita Lukash — Electricity Accounting Engineer, Zasyadko Coal Mine Vladimir Reznichenko — Senior Mechanic Substation Supervisor Vasiliy Notarin — Filling Station Supervisor Andrey Sknar — Site Deputy Mechanic
4. A	PDD with baseline scenario and monitoring plan for the "Coal Mine Methane Utilization at Yakovlev, Production Site, Zasyadko Coal Mine, Donetzk, Ukraine", JI Project submitted February 2005 by RusCarbon
5. A	Revised PDD with baseline scenario and monitoring plan for the "Coal Mine Methane Utilization at Yakovlev, Production Site, Zasyadko Coal Mine, Donetzk, Ukraine", JI Project submitted March 31th, 2005 by RusCarbon
6. A	Revised PDD with baseline scenario and monitoring plan for the "Coal Mine Methane Utilization at Yakovlev, Production Site, Zasyadko Coal Mine, Donetzk, Ukraine", JI Project submitted April 2005 by RusCarbon
7. A	Annexes to the revised PDD with baseline scenario and monitoring plan for the "Coal Mine Methane Utilization at Yakovlev, Production Site, Zasyadko Coal Mine, Donetzk, Ukraine", JI Project submitted April 2005 by RusCarbon
8. A	Communication with Chief Directorate of Industry, Energy, Transport and Communication, Donetsk Regional State Administration, February 2005

Reference No.	Document or Type of Information
9. A	Communication with Ministry of Environment Protection and with Ministry of Energy of Ukraine concerning the project, August 2004
10. A	Decisions of the Board of Zasyadko concerning the provided project, 2003 – 2005
11. A	Study: Estimation of the reduction of pollutant emission to the atmosphere during utilization of the mine methane at the sites of the coal mine named after A.F. Zasyadko taking into account the distribution of discharge and consumption of the gas mixture in 2005 – 2014, approved by the Directors of several Institutes, among these the Institute of the Geotechnical Mechanics and the State Makeyevka Research Institute, the Ministry of Fuel and Energy of Ukraine and the National Academy of Sciences of Ukraine
12. A	Calculation and basis data (2001 – 2004) concerning the own electricity consumption at Zasyadko Coal Mine, 2005
13. A	Study: "Calculation of specific consumption of fuel and energy", National Energy Institute, 2004
14. A	Emission Permits and Penalties, 2003 and 2004
15. A	Declaration concerning the project approval by the responsible department of the municipality of Donetsk, 2004
16. A	Declaration: "On making changes to certain laws of Ukraine as to taxation issues, Ministry of Transport and Energy, Ukraine, 2004
17. A	Several letters and e-mails with answers to questions, open issues, clarification requests, corrective action requests and additional information required in the draft determination report, issued March 23rd, 2005, submitted by RusCarbon
18. A	Excel sheets "CMM Utilization at Yakovlev Sit" with all required calculations, April 2005
19. A	Cash flow analysis with and without JI revenues, 2005-04-06
20. A	Validation and Verification Manual, IETA/World Bank (PCF), http://www.vvmanual.info
21. A	Letter of Endorsement, issued by the Federal Service for Hydrometeorology and Environmental Monitoring, dated October 19, 2004
22. A	Documentation on performed and planned training measures, submitted by Kronostar March 29, 2005
23. A	Methane and Nitrous Oxide Emissions in the Finnish Energy Production, issued by Fortum, dated May 2001
24. A	Letter of confirmation from the local administration in Sharja regarding the historic fuel use at the project site, submitted April 1, 2005

Reference No.	Document or Type of Information
25. A	Production data for 2004, Kronostar Site, submitted March 30, 2005
26. A	Signed board decision paper of meeting held January 22, 2001, submitted March 30, 2005
27. A	Signed board decision paper of meeting held October 1, 2001, submitted March 30, 2005
28. A	Kronostar Business Plan, dated December 28, 2002
29. A	Draft Kronostar Business Plan for ERUPT 5, dated February 2005
30. A	Kronostar Financial Plan (excel sheet), submitted March 2005
31. A	Telephone conversation with Martin Enderlin, SWAPP/SECO, dated March 30, 2005
32. A	Statement from Mr. Frank Goecke, Jaakko Pöyry Consulting, dated March 23, 2005
33. A	Clarifications to the PDD, C4C, submitted April 1, 2005
34. A	Document "Organigramm Kesselanlage" (in German), submitted March 29, 2005
35. A	Lukoil: heat value for heavy fuel oil, submitted March 30, 2005
36. A	Laboratory registration, dated August 18, 2003, submitted March 29, 2005
37. A	Contract with landfill owner regarding deposit of waste products, dated January 11, 2005, submitted March 29, 2005
38. A	Jaakko Pöyry Consulting: Market Study for Panel Production, dated 2002
39. A	Stakeholder consultation: Invitation Letter, dated September 10 and 13, 2002, submitted March 29, 2005
40. A	Stakeholder meeting September 15, 2005: participant list, submitted March 29, 2005
41. A	Stakeholder meeting September 15, 2005: protocol, submitted March 29, 2005
42. A	Stakeholder meeting September 15, 2005: reporting in newspapers, submitted March 29, 2005
43. A	Site assessment for site selection: meeting protocol, site audit performed June 11, 2003 and August 27, 2003, submitted March 29, 2005
44. A	Price for biomass: www.opet.fi and www.tekes.dk and peat: www.ee-21.net
45. A	Confirmation of biomass price by Kronostar (Mr. Quanz), dated April 1, 2005, submitted April 1, 2005
46. A	Betriebshütte III. 3/III Feuerungen
47. A	Taschenbuch der Physik
48. A	Letter from Kronostar to biomass suppliers regarding sustainable harvesting methods, dated February 18, 2005, submitted March 14, 2005
49. A	License to operate for phase I of the project, submitted March 14, 2005
50. A	License to construct for phase II of the project, submitted March 14, 2005
51. A	Contract regarding FSC certification with accredited certification agency, dated October 29, 2004, submitted March 14, 2005

Reference No.	Document or Type of Information
1. B	On-site interview concerning project history and development, project participants, business plan, additionality and crediting period with the project owner conducted on April 27th, 2005 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Andrej Rosternikow — Translator Interviewed persons: Boris Bokiy — Deputy General Director of Zasyadko Coal Mine Michael Sattler — PDD Developer, Austrian Energy Agency Elvira Lutter — PDD Developer, Austrian Energy Agency Juliya Zalesnova — Head of Plan-Economic Department Zasyadko Temporary participants: Drs. Jelmer A. Hoogzaad — Project Officer, SenterNovem L.H.A. (Wies) Broens — Project Officer, SenterNovem
2. B	On-site interview with the project owner concerning baseline methodology, monitoring plan, feasibility study and technical background information as well as technical questions conducted on April 28th, 2005 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Andrej Rosternikow — Translator

Reference No.	Document or Type of Information
	Interviewed persons: Boris Bokiy — General Director of Zasyadko Cola Mine, Donetsk Vasiliy Ivanov — Deputy Technical Director of Surface Degasification of Zasyadko Coal Mine Vjacheslav V. Lukinov — Vice Director , Institute of Geotechnical Mechanics named by N. Poljakov Michael Sattler — PDD Developer, Austrian Energy Agency Elvira Lutter — PDD Developer, Austrian Energy Agency Juliya Zalesnova — Head of Plan-Economic Department Zasyadko
3. B	Plant and plant territory visit (Grigoryevskaya and Vostochnaya site, further Yakovleskaya site) and direct on-site interviews with responsible technical staff on April 28th, 2005 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Andrej Rosternikow — Translator Interviewed persons: Boris Bokiy — General Director of Zasyadko Cola Mine Vasiliy Ivanov — Deputy Technical Director of Surface Degasificationof Zasyadko Coal Mine Vjacheslav V. Lukinov — Vice Director , Insititute of Geotechnical Mechanics named by N. Poljakov Michael Sattler — PDD Developer, Austrian Energy Agency Elvira Lutter — PDD Developer, Austrian Energy Agency Juliya Zalesnova — Head of Plan-Economic Department Zasyadko

Reference No.	Document or Type of Information
4. B	Draft PDD with baseline scenario and monitoring plan for "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine", , dated April 15th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.), published in the Global Stakeholder Process from April 25th to May 25th, 2005
5. B	PDD with baseline scenario and monitoring plan for "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine", dated May 3rd, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
6. B	PDD with baseline scenario and exclusive of final monitoring plan for "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetzs, Ukraine", dated June 28th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
7. B	Final PDD for "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine", dated August 5th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
8. B	Excel-sheets for calculation of Emission Reduction Units (ERUs) for "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine", dated April 16th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
9. B	Final version of Excel-sheets for calculations of ERUs for "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine", dated August 5th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
10. B	BCCK Engineering, Inc.: Feasibility Study A.F. Zasyadko, Zasyadko Final Draft, BCCK Job # 1601, Nitech, revised version Oktober 2003
11. B	Technical description, version 1 for "Recovery and utilization of coal methane through power generation" JI project, Zasyadko Coal Mine, Donetzsk, Ukraine", dated April 29th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
12. B	Technical description, completed version, for "Recovery and utilization of coal methane through power generation" JI project,

Reference No.	Document or Type of Information
	Zasyadko Coal Mine, Donetsk, Ukraine", dated June 6th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
13. B	Final Technical description for "Recovery and utilization of coal methane through power generation" JI project, Zasyadko Coal Mine, Donetsk, Ukraine", dated August 4th, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
14. B	Institute of the Geotechnical Mechanics named after N.S. Polyakov of the National Academy of Scienced of Ukraine, State Makeyevka Research Institute in safety of the operations in the mining industry: Estimate of the reduction of pollutant emission to the atmosphere during utilization of the mine methane at the sites of the coal mine named after A.F. Zasyadko taking into account the distribution of discharge and consumption of the gas mixture in 2005-2014, June 2005
15. B	DIA.NE XT Version V11.02 User Manual; Jenbacher AG, Austria, September 2003
16. B	Business Plan, final version, for "Recovery and utilization of coal methane through power generation" JI project, Zasyadko Coal Mine, Donetsk, Ukraine", JI Project , dated August 1st, 2005, submitted by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
17. B	Draft Determination Protocol for "Recovery and utilization of coal methane through power generation" JI project, Zasyadko Coal Mine, Donetsk, Ukraine", JI Project, dated May 22nd, 2005
18. B	Communication with Chief Directorate of Industry, Energy, Transport and Communication, Donetsk Regional State Administration, February 2005 concerning the realisation of "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine
19. B	Communication with Ministry of Environment Protection and with Ministry of Energy of Ukraine concerning the project, August 2004 concerning "Recovery and utilization of coal methane through power generation" JI project, Grigoryesvkaya and Vostochnaya Production Site, Zasyadko Coal Mine, Donetsk, Ukraine
20. B	Decisions of the Board of Zasyadko concerning the provided project, 2003 – 2005
21. B	Study: Estimation of the reduction of pollutant emission to the atmosphere during utilization of the mine methane at the sites of the coal mine named after A.F. Zasyadko taking into account the distribution of discharge and consumption of the gas mixture in 2005 – 2014, approved by the Directors of several Institutes, among these the Institute of the Geotechnical Mechanics and the State Makeyevka Research Institute, the Ministry of Fuel and Energy of Ukraine and the National Academy of Sciences of Ukraine
22. B	Calculation and basis data (2001 – 2004) concerning the own electricity consumption at Zasyadko Coal Mine, 2005
23. B	First results from methane suction system at Grigoryevskaya, Zasyadko Cola Mine, May 2005

Reference No.	Document or Type of Information
24. B	Study: "Calculation of specific consumption of fuel and energy", National Energy Institute, 2004
25. B	Emission Permits and Penalties, 2003 and 2004
26. B	Declaration: "On making changes to certain laws of Ukraine as to taxation issues, Ministry of Transport and Energy, Ukraine, 2004
27. B	Answers to all open issues, clarification requests and corrective action requests in the Draft Determination Protocol, submitted 8h August, 2005 by Energieverwertungsagentur – the Austrian Energy Agency (E.V.A.)
28. B	E-mail with answers to all technical questions, submitted by Mr. Bokiy (Deputy General Director of Zasyadko Coal Mine), August 1st, 2005
29. B	Pictures from on-site visit at Zasyadko coal mine with meter equipment at several sites
30. B	Validation and Verification Manual, IETA/World Bank (PCF), http://www.vvmanual.info
31. B	Information concerning invitation and implementation of the (local) public stakeholder process with feedback from consultations, submitted May 2005
32. B	Contaminant emission report, 2004

Reference No.	Document or Type of Information
1.C	"Analysis of geomechanical processes in coal carrying strata by prior extraction of coal mine methane", National Academy of Science of Ukraine, Methane of Ukraine, edition 17, 2000
2. C	Handbook "Coal mine methane in Ukraine: opportunities for production and investment in the Donetsk coal basin", U.S. Environment Protection Agency, 2001, pp. 1-3.
3. C	cdm.unfccc.int
4. C	USA, June 2003, "Advanced Technology Partners Inc", annes 2-1 and annex 2-2
5. C	Decree of the President of Ukraine as of 16th of January 2002 # 26/2002 "On urgent activities for improvement of work conditions and development of the state supervision at mining enterprises"; The Governmental Decree as of 6th of July 2002 # 939 "On complex Programme of coal-beds degasification at coal mines"
6. C	"Project Financing", Alexey V. DIDKOVSKEY, the Ukrainian Journal of Business Law, May 2003. http://www.shevdid.com/publication/evd_031.pdf
7. C	Reference JISC04 "Guidance on Criteria for Baseline Setting and Monitoring", ji.unfccc.int
8. C	LHV of 28.47 GJ7t and a mass content of coal of 87.8%
9. C	Guidance on criteria for baseline setting and monitoring, version07, Joint Implementation Supervisory Committee, ji.unfccc.int
10. C	Operational Guidelines for PDD of JI projects, Ministry of Economic Affairs of the Netherlands, May 2004
11. C	Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 06, 19. May 206, cdm.unfccc.int
12. C	Ukrenergo, http://www.ukrenergo.energy.gov.ua/ukrenergo/control/publish/article?art_id=39047&cat_id=35061
13. C	http://mpe.kmu.gov.ua/fuel/control/uk/doccatalog/list?currdir=50505
14. C	Energy Strategy of Ukraine for the Period until 2030, section 16.1, page 127.
15. C	Source: Ukraine Energy Policy Review, OECD/IEA, Paris 2006. p. 272, table 8.1
16. C	Ministry of Energy, letter dated 11 January 2007
17. C	http://www.xaec.org.ua/index-ua.html
18. C	State Committee of Statistics of Ukraine. Fuel and energy resources of Ukraine 2001-2003. Kyiv, 2004
19. C	"Overview of data on electrical power plants in Ukraine 2001-2005", Ministry of Fuel and Energy of Ukraine, 31 Oct. 2006 and 16 Nov. 2006
20. C	IPCC 2006. Revised guidelines for national greenhouse gas inventories
21. C	Visit at Zasyadko Coal Mine, Thomas Kleiser (Lead Auditor), Nov. 23rd, 2006
22. C	PDD in GSP: "Utilisation of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko", PDD version 4.0, dated February 2nd, 2007 - JI-Ref. No 0035 under http://ji.unfccc.int/JI_Projects/Verification/PDD/index.html
23. C	Final PDD: "Utilisation of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko", PDD version 4.4, dated March 27th, 2008
24. C	On-site interview with the project owner conducted on October 12th, 2007 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Dr. Albert Geiger — TÜV Industrie Service GmbH TÜV SÜD Group Anna Peretykina — TÜV Industrie Service GmbH TÜV SÜD Group Interviewed persons: Sergey Zykra — Diagnostics engineer Boris Bokiy — Deputy General Director of Zasyadko Coal Mine Evgeniy Berezovskiy — CHP Director, Zasyadko Coal Mine Vyacheslav Kozyrenko — CHP Technical Director, Zasyadko Coal Mine Alexander Posternikov — Translator
25. C	On-site interview with the project owner conducted on March 29th, 2007 at Zasyadko Coal Mine, Donetsk, Ukraine by auditing team of TÜV SÜD Validation team on-site: Thomas Kleiser — TÜV Industrie Service GmbH TÜV SÜD Group Nikolaus Kröger — TÜV Industrie Service GmbH TÜV SÜD Group Interviewed persons: Igor Kuznetsov — Chief Energy Manager of Zasyadko Coal Mine Boris Bokiy — Deputy General Director of Zasyadko Coal Mine Evgeniy Berezovskiy — CHP Director, Zasyadko Coal Mine Vyacheslav Kozyrenko — CHP Technical Director, Zasyadko Coal Mine Alexander Posternikov — Translator Igor Laptev — Foreign Economy Department, Zasyadko Coal Mine Valeriy Sade — PDD Develper, Global Carbon B. V.

26. C	Letter of Approval Japan including translation and authorization, issued by Ministry of Economy, Trade and Industry, Government of Japan, dated January 30th, 2007
27. C	Letter of Approval Ukraine, including translation, issued by Ministry of Environmental Protection of Ukraine, dated March 14th, 2006 with additional reconfirmation of the LoA from July 24th, 2007
28. C	Letter of Approval Switzerland, issued by Federal Office for the Environment FOEN, dated May 4th, 2007
29. C	Letter of Approval Netherlands, issued by Energy and Climate Change SenterNovem, dated May 16th, 2007
30. C	Modalities of Communication, dated November 7th, 2007
31. C	Excel sheet with CO_2 calculation, version 4.3, submitted on February 5th, 2008
32. C	Additionality proofs: Excel sheets with Financial calculation version 5 with and without CO2, Interest rates dated December 2003
33.C	Final statement CEF of TÜV SÜD on the calculation of the calculation and justification of the Carbon Emission Factor (CEF) of the Ukrainian electricity grid, dated 17.08.2007
34.C	2nd Nartional Report (in Russian Language) of Ukraine to UNFCCC
35. C	Answer Letter with Annex from Mr. Borisov of Department of strategic policy and perspective development of fuel and energy complex, Ministry of Fuel and Energy of Ukraine, on questions related to the calculation of the CEF, submitted 02.08.2007
36. C	Energy Strategy of Ukraine for the period until the year 2030; Ministry of Fuel and Energy of Ukraine, issued 2006
37. C	.xls sheets for the calculation of the Ukrainian CEF, submitted January 2007
38. C	Power data Ukraine, November 16th, 2006, Ministry of Fuel and Energy of Ukraine