DETERMINATION REPORT GREENSTREAM NETWORK GMBH

DETERMINATION OF THE RECONSTRUCTION OF KRAMATORSK HEAT AND POWER PLANT

REPORT NO. UKRAINE-0029/2008

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

DETERMINATION REPORT

Date of first issue:	Organisational unit:
28/08/2009	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
GreenStream Network GmbH	Mr. Yevgen Groza

Summary:
Bureau Veritas Certification has made the determination of the «Reconstruction of Kramatorsk heat and power plant» project of GreenStream Network GmbH located in Donetsk region Kramatorsk city on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology developed according the Guidance on *Criteria for Baseline Setting and Monitoring* and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.:	Subject Group:
UKRAINE-0029/2008	JI

Report title:
«Reconstruction of Kramatorsk heat and power plant»

Work carried out by:
Ivan Sokolov – Climate Change Lead Verifier
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Indexing terms

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Abbreviations

CAR	Corrective Action Request
CL	Clarification Request
CO	Carbon Monoxide
CO_2	Carbon Dioxide
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
I	Interview
IE	Independent Entity
IETA	International Emissions Trading Association
MoV	Means of Verification
NG	Natural Gas
PDD	Project Design Document
PP	Project Participant
SP	Sub Project
UNFCCC	United Nations Framework Convention for Climate Change
UES	United Energy System

DETERMINATION REPORT

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1 INTRODUCTION

GreenStream Network GmbH has commissioned Bureau Veritas Certification to determinate the JI project Improvement of the Reconstruction of Kramatorsk heat and power plant at Donetsk region Kramatorsk city («Kramatorskteploenergo» LLC).

This report summarizes the findings of the determination of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting, and Host Country criteria.

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document, 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.

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.

1.3 GHG Project Description

Currently, Kramatorsk heat and power plant (HPP) with installed electrical capacity of 150 MW provides heat and electric power to the largest industrial consumers as well as population of Kramatorsk. It was constructed as coal-fired and natural gas-fired heat and power plant. The volume of generated electric power in 2007 was 205 490 MWh, heat power – 536 169 Gkal.

Kramatorsk HPP supplies heat to the consumers in the form of hot water through the system of heat supply network as well as in the form of steam by the steam pipeline to JSC "Novokramatorsk machine-building plant". Today HPP works against direct

contracts with consumers and main electric and heat power consumers are the enterprises of the town. Electric power supply to the grid (United Energy System / UES) of Ukraine has begun since the 1st of October 2007. Produced electricity is transmitted via 110 kV lines to the national power market and also via GRU-6 kV lines to JSC "Donetskoblenergo", JSC "Novokramatorsk machine-building plant" and other consumers.

The main goal of Joint implementation project "Reconstruction of Kramatorsk heat and power plant" is implementation of measures which will improve fuel consumption efficiency and will reduce own consumption of electric power by the plant what will result in GHG emissions reduction to the atmosphere.

The project foresees large-scale reconstruction of existing equipment of Kramatorsk HPP. The program of reconstruction of Kramatorsk HPP within Joint implementation includes the following measures:

- Reconstruction of boilers № 7, 9;
- Reconstruction of turbines № 3, 4;
- Reconstruction of cooling tower № 1;
- Frequency controllers' installation;
- Feeding pump replacement №5;
- Hydraulic ash removal modernization;

In addition to this, rehabilitation of district heating system in Kramatorsk is foreseen within JI project. It includes:

- Replacement of old heat pipelines which supply consumers with heat power generated at HPP by new pre-insulated pipes in polyurethane foam cover and pipes with lagging from mineral cotton;
- Replacement of 200 capacitive heat exchangers by plate heat exchangers at substations of the town;
- Major rehabilitation of boiler-rooms with replacement of pipes and valves.

As the result of reconstruction the efficiency of Kramatorsk HPP equipment will increase from 56% of gross efficiency (combined heat and electric capacity with the use of natural gas) to approximately 78% of efficiency with the use of natural gas and 65% of efficiency – with the use of coal. The increase of the equipment efficiency will lead to reduction of the level of fuel consumption. As far as natural gas is more expensive compared to coal, it is considered that fuel savings are to be completelysavings of natural gas. This is conservative assumption. Besides, the reduction of own electric powerconsumption will allow increasing supply of electricity into the grid therefore contributing to additional emission reductions.

The project with the total investment costs over 67 million UAH will give the following benefits:

- Positive effect on the environment; Improvement of technical and economic indicators of work of HPP;

- Positive social effect. Therefore, project implementation will be economically and socially beneficial.

Positive aspects of social and economic effect from the project implementation:

-The national grid of Ukraine and industrial consumers of Kramatorsk are expected to benefit from increased of reliability of power supply by the Kramatorsk HPP;

- Local community and employees of Kramatorsk HPP will benefit from the jobs available on long term prospective due to more reliable work of the enterprise in future;

- The industrial and residential consumers of Kramatorsk who will receive a better quality heat supply service.

Positive aspects of project effect on the environment of Kramatorsk: -as a result of project implementation the amount of fossil fuel (valuable non-renewable source ofenergy) will be reduced at the process of heat and power energy generation;

- project implementation will reduce greenhouse and toxic gases emissions (carbon dioxide, nitric oxide and carbon monoxide) and prevent its further accumulation at the atmosphere what in its turn causes climate change.

1.4 Determination Team

The determination team consists of the following personnel:

Ivan Sokolov Bureau Veritas Certification	Climate Change Lead Verifier
Oleg Skoblyk Bureau Veritas Certification	Climate Change Verifier
Nadiya Kaiiun Bureau Veritas Certification	Climate Change Verifier
Kateryna Zinevych Bureau Veritas Certification	Climate Change Verifier
Ashok Mammen Bureau Veritas Certification,	Internal Technical reviewer
Denis Pishchalov Bureau Veritas Certification,	Specialist in economics

2. METHODOLOGY

The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA/PCF). 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 organizes, details and clarifies the requirements JI project is expected to meet;

It ensures a transparent determination process where the determinator will document how a particular requirement has been validated and the result of the determination.

The determination protocol consists of five tables. The different columns in these tables are described in Figure 1

The completed determination protocol is enclosed in Appendix A to this report.

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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**), a **Corrective Action Request (CAR)** or a **Clarification Request (CL)** of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is determined. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements 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 organized in several 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 section 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 Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several 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 section 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 Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 4: Legal requirements				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or section 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 Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 1/2/3/4**	**Summary of project owner response**	**Determination conclusion**
If the conclusions from the Determination are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD) submitted by GreenStream Network GmbH and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (JI-PDD), methodology, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, GreenStream Network GmbH revised the PDD and resubmitted it on 28/08/09.

The determination findings presented in this report relate to the project as described in the PDD version 2.2.

2.2 Follow-up Interviews

On 12/06/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of GreenStream Network GmbH and «Kramatorskteploenergo» LLC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
«Kramatorskteploenergo» LLC	➢ Organizational structure. ➢ Responsibilities and authorities. ➢ Training of personnel. ➢ Quality management procedures and technology. ➢ Rehabilitation /Implementation of equipment (records). ➢ Metering equipment control. ➢ Metering record keeping system, database.
GreenStream Network plc	➢ Baseline methodology. ➢ Monitoring plan. ➢ Monitoring report. ➢ Deviations from PDD.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol in Appendix A.

3 DETERMINATION FINDINGS

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

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

2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have 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 Appendix A. The determination of the Project resulted in 8 Corrective Action Requests and 17 Clarification Requests.

3) The conclusions for determination subject are presented.

3.1 Project Design

Bureau Veritas Certification recognizes that «Kramatorskteploenergo» LLC Project is helping country fulfill its goals of promoting sustainable development. The project is expected to be in line with host-country specific JI requirements.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.

The project design is sound and the geographical and temporal (10 years) boundaries of the project are clearly defined.

Below, a transcription of the outstanding issues related to project design.

Corrective Action Request (CAR1):
There is no information about sponsor Party.
PP's response: Sponsor Party was identified. PDD was amended, see page 4.
Conclusion: PDD version 2.2 was checked. CAR1 is closed.

Corrective Action Request (CAR2):
There is no evidence of written project approvals by the Parties involved
PP's response: After finishing of project determination report, the PDD and Determination Report will be presented to National Environmental Investments Agency of Ukraine for receiving of the Letter of Approval. The Letter of Approval from the country - investor will be provided after approval of project by Ukraine.

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3 Whitehall Place

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Mr Chris Dodwell (dna@decc.gsi.gov.uk)
Head of International Climate Change Division
Phone: (+44) 0300 068 5423

Conclusion: Will be closed after report finalizing.

Corrective Action Request 4 (CAR4):
Please present the date of completing in the DD/MM/YYYY format.
PP's response: The date of completion of baseline study: 01/04/2009. PDD was amended, see page 27 of the PDD.
Conclusion: PDD version 2.2 was checked. CAR is closed.

Corrective Action Request 5 (CAR5):
Please, provide the project's operational lifetime in years and months
PP's response: The length of project's operational lifetime is 120 months / 10 years of project lifetime. PDD was amended, see page 27 of the PDD.
Conclusion: PDD version 2.2 was checked. CAR is closed.

Corrective Action Request 6 (CAR6):
Please, provide the length of the crediting period in years and months
PP's response: The length of crediting period is 120 months / 10 years of project lifetime. PDD was amended, see page 27 of the PDD.
Conclusion: PDD version 2.2 was checked. CAR is closed.

Clarification Request 1 (CL1):
The map is not in English. See section A.4.1.4 of the PDD.
PP's response: The map is modified. PDD was amended, see page 2 of PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 2 (CL2):
Please, clarify if the project technology is likely to be substituted by other or more efficient technologies within the project period.
PP's response: The changes into the list of reconstruction measures are not envisaged. PDD was amended, see page 12 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 3 (CL3):
Please, clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.
PP's response: The staff members of JSC 'Kramatorskteploenergo' were trained to operate the new equipment installed at the Kramatorsk power plant. The cost of training was 21 ths. UAH. PDD was amended, see page 12 of the PDD.

Conclusion: «Kramatorskteploenergo» LLC presented acts, orders and log-books on trainings and knowledge verifications of personal. They are listed in Determination Report. CL is closed.

Clarification Request 4 (CL4):
Please, clarify if the project makes provisions for meeting training and maintenance needs
PP's response: Personnel training is necessary. PDD was amended, see page 12 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

3.2 Baseline and Additionality

The approach to establish baseline and estimate of emissions reductions as a result of project implementation is based on the approved methodology ACM0002 «Consolidated baseline methodology for grid electricity generated from renewable sources". The monitoring approach of ACM0002 was also used to establish the monitoring plan. The approved methodology ACM0062 «Combined tool for the determination of baseline scenario and demonstration of additionality» (Version 02.2) was used for the analysis of additionality. It has to be mentioned that methodology ACM0002 has to be used with deviations to the original methodological guidance due to being not directly applicable to the proposed JI project.

The approach used is in the line with Guidance on Criteria for Baseline Setting and Monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

The following aspects give the ability to use chosen methodology:

- The proposed project makes the process of heat and power energy generation more effective;
- The proposed project replaces the power energy generated within UES.

The possible alternative baseline scenarios are the following:
(a) Kramatorsk HPP will continue its operation with the existing capacities. The consumption of electric power for own needs of HPP will be supplied with existing equipment of Kramatyorsk HPP and other power plants connected to the UES of Ukraine.

(b) Proposed project will not be registered as JI project. CO2 emissions reduction will not be registered as ERUs. Implementation of project without JI mechanism will mean decrease of the positive cashflow by approximately 2.22 million Euro during 2008-2012; or by 5.12 million Euro (ERU price considered to be EUR 10/t CO2).

(c) The third alternative foresees the construction of absolutely new HPP with 120 MW installed electric power capacity and 200 MW of heat capacity.

(d) The new steam turbines will be installed instead of rehabilitation of the existing turbines №3, 4; new gas-fired boilers will be installed instead of rehabilitation of the existing boilers 7, 9. New equipment will be operated with the same installed capacity (150 MW) as today. The quantity of power produced will be the same as in case of the JI project implementation.

(e) The new steam turbines will be installed instead of rehabilitation of the existing turbines №3, 4; new coal-fired boilers will be installed instead of rehabilitation of the existing boilers 7, 9. New equipment will be operated with the same installed capacity (150 MW) as today. The quantity of power produced will be the same as in case of the JI project implementation.

(f) The new steam turbines will be installed instead of rehabilitation of the existing turbines №3, 4; new biomass boilers will be installed instead of rehabilitation of the existing boilers 7, 9. New equipment will be operated with the same installed capacity (150 MW) as today. The quantity of power produced will be the same as in case of the JI project implementation.
Substabtial volumes of fossil fuel will be saved in this scenario. Due to constant increase of natural gas prices in Ukraine this alternative is a realistic one. CO2 emissions will be much less compared to other alternative scenarios due to use of biomass (wood, wood waste).

Therefore, of all proposed scenarios those were determined only scenarios (a) and (b) are realistic. The scenario (a) suits most of all in case of project absence and presents baseline scenario of all discussed baseline scenarios**.**

Corrective Action Request 3 (CAR3):
There is no key information and data used to establish the baseline in provided this section (see GUIDELINES FOR USERS OF THE JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM Version 03)
PP's response: The key information and data used for identification of the baseline by the methodology ACM0002 (version10) is written in according to the Guidelines for users of the Joint implementation project design document form. A link to the key baseline parameters (section D 1.1.3 Table 6) has been added to the Section D. See pages 16, 21.
Conclusion: PDD version 2.2 was checked. CAR is closed.

Clarification Request 5 (CL5):
Used version of the methodology ACM0002 (version 8) is not the latest one (version 10). Please clarify.
PP's response: The methodology ACM0002 (version 10) was used. PDD was amended, see page 16 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 6 (CL6):
Please, clarify purpose of usage of methodology AM0062. Provide references to items and formulas where is used methodology AM0062.

PP's response: The "Combined tool to identify the baseline scenario and demonstrate additionality" version 02.2 (as suggested in the ACM0062 methodology) was used for baseline setting and additionality analysis. The link to the ACM0062 has been removed. The "Combined tool to identify the baseline scenario and demonstrate additionality" version 02.2 was used for baseline setting and additionality analysis.
Conclusion: Explanations were provided in the PDD version 2.2. PDD version 2.2 was checked. CL is closed.

Clarification Request 7 (CL7):
Please, specify the volumes of capital investments necessary for introduction of 4th and 5th alternative scenarios, and explain why the costs of the proposed actions are determined as extremely high.
PP's response: Estimated cost of measures proposed in 4-th alternative variant is 500 mln. dollars.

Estimated cost of measures proposed in 5-th alternative variant is 500 mln. dollars.

The cost is defined as extremely high because in 2009 the total income of Kramatorsk city budget (the city is a major stakeholder of Kramatorsk HPP) is expected to be 403.2 mln. UAH. PDD was amended, see page 20 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 8 (CL8):
Please, clarify the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)
PP's response: The main assumptions of the baseline methodology ACM0002 (version 10) were added in part B.1. PDD was amended, see page 16 of the PDD.
Conclusion: The basic assumptions were provided to PDD. CL is closed.

3.3 Monitoring Plan

The Project uses the approved consolidated monitoring methodology ACM0002 («Consolidated baseline methodology for grid electricity generated from renewable sources» (version 10)). Refer to section 3.2 above.

Corrective Action Request 7 (CAR7):
Information on the collection and archiving of information on the environmental impacts of the project is not provided
PP's response: Environmental indicators such as dust emissions, NOx, or SOx will be available to the verifier. These indicators are being reported to the authorities of Donetsk region on a monthly and annual basis. PDD was amended, see page 29 of the PDD.
Conclusion: Reports of dust emissions, NOx, SOx are checked and listed in Determination Report. CAR is closed.

Clarification Request 9 (CL9):
Please, clarify how methodology was used for determined monitoring plan?

PP's response: Monitoring plan was developed according to the approved methodology of baseline and monitoring ACM0002 «Consolidated baseline methodology for grid electricity generated from renewable sources" (version 10). PDD was amended, see page 28 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 10 (CL10):
Plese, clarify why leakage is not expected.
PP's response: The proposed JI project results in the decrease of consumption of natural gas and coal. The reduction of fossil fuel consumption may lead to decreasing the emissions from the related sources, such as coal transportation via railroad, or natural gas transportation by pipelines. Therefore, the only leakage that could be expected in relation with the proposed JI project, would be negative (emission reduction decrease outside of the boundaries set). The possible leakage in the project was considered to be zero. This is a conservative assumption.
PDD was amended, see page 43 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 11 (CL11):
Please, provide reference to the relevant host Party regulation(s)
PP's response: The main Laws of Ukraine used during the project implementation at Kramatorsk HPP are listed. PDD was amended, see page 29 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

3.4 Calculation of GHG Emissions

The baseline emissions are calculated by the following formula:

$BE_y = BE_{FC,elec,y} + BE_{electricity,y} + BE_{heat\_ex}$

where: **$BE_{FC,elec,y}$** – baseline emissions from combustion of each type of fuel consumed by power plant for heat and power generation in the baseline scenario that arecalculated by multiplication of amount of consumed fuel i in the project by CO2 emissions factor (t CO2/t (ths.m^3)) for fuel of type «i» consumed in the year «y»,t CO2
$BE_{electricity,y}$ – baseline emissions from electric power generation to the grid, that will be replaced due to project implementation at HPP, t CO2
BE_{heat_ex} - baseline emissions from electric power consumption by boiler-rooms, on which the replacement of heat exchangers is planned, t CO2.

The detailed algorithms are described later under sections D.1.1.4 of the PDD.

Project emissions (**Ep**) are determined by the following formula:
$Ep = PE_{FC,elec,y} + PE_{heat\_ex}$
where:
$PE_{FC,elec,y}$ – project emissions from actual amount of consumed fuel of each type by HPP for generation of electric and heat power, tons of CO2. Actual – is the amount of

fuel consumed by boilers at HPP not including the fuel which will be saved due to heat supply network rehabilitation.
PEheat_ex – project emissions from electric power consumption by boiler-rooms, on which heat-exchangers replacement will be implemented, t CO2.

With reference to this methodology, project does not lead to any leakage.

The estimated annual average of approximately 74404 tCO2e over the crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project.

Clarification Request 12 (CL12):
Please clarify source of the formulae that used to estimate anthropogenic emissions by source of GHGs due the project
PP's response: The formulae for GHG emissions calculation are taken from the following methodologies: ACM0002 «Consolidated baseline methodology for grid electricity generated from renewable sources" (version 10); methodology described in PDD of JI project "Rehabilitation of district heating system in Chernigiv region". PDD was amended, see page 16 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 13 (CL13):
Please clarify if conservative assumptions are used to calculate project GHG emissions
PP's response: The conservative assumptions for calculation of GHG emissions in the project are listed. PDD was amended, see page 51 of the PDD.
Conclusion: PDD version 2.2 was checked. All conservative assumptions for calculation of GHG emissions in the project period were provided in PDD. CL is closed.

Clarification Request 14 (CL14):
Please clarify if conservative assumptions are used to calculate baseline GHG emissions
PP's response: The conservative assumptions for calculation of GHG emissions in the baseline are listed. PDD was amended, see page 51.
Conclusion: PDD version 2.2 was checked. CL is closed.

3.5 Environmental Impacts

In Ukraine the Environmental Impact Assessment is regulated by the state norms DBN A.2.2.1-2003 "On the content and composition of documents assessing the environmental impacts during design and construction of production facilities, buildings or houses". The proposed JI project involves only rehabilitation of the existing equipment of the power plant without commissioning of any new equipment. Therefore, the Environmental Impact Assessment procedure is not required.

Regular independent checks of the emission levels compliance with the acceptable limits are performed by "NPO Ekologia" (Donetsk). Results of the checks are issued in a

standard form of a "Report on the check of compliance against the allowed volumes of atmospheric emissions".

JSC "Kramatorskteploenergo" has received the permit for atmospheric emissions from stationary sources #1412900000-12 issued by the Ministry of Environment of Ukraine. Emissions of hazardous substances from the plant are within the limits specified in the emission permit. Since the proposed JI project does not involve any capital construction and does not lead to increase of hazardous substances' emissions, no assessment of the project by either the local environmental authority or other relevant bodies is required.

The proposed project will not result in any "air pollution whose physical origin is situated wholly or in part within the area under the national jurisdiction of one State and which has adverse effects in the area under the jurisdiction of another State" (the transboundary effect as defined in the text of the Convention on Long-range Transboundary Air Pollution ratified by Ukraine on March 19th, 1999). The proposed project does not create any new sources of pollution and only reduces hazardous emissions by means of decreasing fossil fuel consumption. It also has to be noted that the distance from Kramatorsk HPP to the nearest border of Ukraine is more than 200 km (see Figures 1 and 2), therefore there is no possibility of a transboundary effect.

The Letter of Approval from Ukraine is expected after the submission of the PDD to the National Agency for Environmental Investments (the DFP for Ukraine). The Letter of Approval will be an evidence of the project's compliance with the requirements of the host country.

The proposed Joint Implementation Project "Reconstruction of Kramatorsk HPP" will have positive effect on the environment.

Project implementation will allow saving approximately 105337 thousand m^3 of natural gas and 24781 t of coal during 2008-2012. Natural gas and coal are non-renewable resources and their saving is therefore important. Project implementation will also allow saving approximately 51 169 MWh of electric power during 2008-2012.

The project is expected to have the following effects on the environment:

Atmosphere
The project's implementation will reduce atmospheric emissions of NOx, SOx, CO and solid particles due to the decrease of consumption of fossil fuel and power from the grid. Therefore, the project is expected to have a positive effect on the atmosphere.

Water
The impact on water is expected to be the same for the project compared to the baseline scenario. Impact on water is regulated by The Water Code of Ukraine and the state norms SNiP 4630-92 that defines the maximum limits on poluutant's concentration in domestic water reservoirs.

Land/Soils
No impact on the land use or the state of soils is identified within the project.
The land use procedures are regulated by the Land Code of Ukraine and the national technical standard GOST 17.4.1.02.-83 “On Protection of environment and soils. Classes of chemical pollutants to be controlled”.

Biodiversity
No impact on biodivestisy is identified within the proposed project.

Waste generation, handling and utilization
In the course of the project’s implementation some waste is generated after dismantling of the old equipment, pipes and so on.
The old equipment parts will be utilized to avoid waste generation.

Corrective Action Request 8 (CAR8):
Transboundary effects are not considered (no effect can be deduced only).
Please, explain why the project has no transboundary impact.
PP’s response: The transboundary impacts as defined in the text of the Convention on Long-range Transboundary Air Pollution ratified by Ukraine will not occur due to the project activities.. PDD was amended, see page 54 of the PDD.
Conclusion: PDD version 2.2 was checked. CAR is closed.

Clarification Request 15 (CL15):
Please, clarify are there any requirements for an Environmental Impact Assessment (EIA)?
PP’s response: Considering that the project does not foresee commissioning of any new equipment, but only reconstruction of existing equipment, the Assessment of Environmental impacts is not required. PDD was amended, see page 54 of the PDD..
Conclusion: It was checked during site visit that the proposed project activity includes only reconstruction of existing equipment such as boilers, water-cooling tower etc. and don’t foresee commissioning of any new equipment. CL is closed.

Clarification Request 16 (CL16):
Please clarify is the project activity environmentally licensed by the competent authority.
PP’s response: Considering that the project’s measures do not involve capital construction and do not lead to increase of harmful emissions, the assessment by local environmental inspection or other relevant bodies is not required. PDD was amended, see page 54 of the PDD.
Conclusion: PDD version 2.2 was checked. CL is closed.

Clarification Request 17 (CL17):
Please clarify are there environmental permit?
PP’s response: JSC “Kramatorskteploenergo” has received the permit for atmospheric emissions from stationary sources #1412900000-12 issued by the Ministry of Environment of Ukraine. The emissions of hazardous substances at the enterprise are

within the limits specified in the emission permit. PDD was amended, see page 54 of the PDD.
Conclusion: Supporting documents were analysed, they are listed in Determination Report. PDD version 2.2 was checked. CL is closed

3.6 Comments by Local Stakeholders

In accordance with Ukrainian legislation, JSC Kramatorskteploenergo has consulted the regional authority to obtain the necessary approvals for construction of the individual subprojects. No stakeholder consultation is required by Host Party for this JI project.

A summary of project has been submitted to Kramatorsk City Council at the stage of the PDD development. The response of the City Council is attached in Annex 4 of the PDD.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the AIE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the website (http://www.bureauveritas.com/) on 16/07/2009 and invited comments within 16/08/2009 by Parties, stakeholders and non-governmental organizations.

There are no comments from stakeholders.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the Reconstruction of Kramatorsk heat and power plant Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides analysis of investment and other barriers to determine that the project activity itself is not the baseline scenario.

By reconstruction of boilers № 7, 9, turbines № 3, 4, cooling tower № 1, frequency controllers' installation, feeding pump replacement №5 and hydraulic ash removal modernization of Kramatorsk HPP, the project is likely to result in reductions of GHG emissions partially. An analysis of the investment and other barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (2.2) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

6 REFERENCES

Category 1 Documents:
Documents provided by JSC Kramatorskteploenergo and GreenStream Network GmbH that related directly to the GHG components of the project.

/1/ PDD version 2.0, dated: 01.04.09
/2/ PDD version 2.1, dated: 19.08.09
/3/ PDD version 2.2, dated: 28.08.09
/4/ Letter of Endorsement issued by the Environment Ministry of Ukraine..

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/. Act #1 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/2/. Act #2 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/3/. Act #3 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/4/. Act #4 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/5/. Act #5 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/6/. Act #6 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.

/7/. Act #7 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/8/. Act #8 of assessment of heat consumption recording complex with heat meter SVTU-10M(M1). Dated 21.11.2008.
/9/. Act of assessment of natural gas consumption measuring and recording complex
/10/. Act of coal short weight detection. Dated 27.05.2009.
/11/. Act of coal short weight detection. Dated 30.05.2009.
/12/. Act of executed works technical readiness. Dated 07.10.2008.
/13/. Act of heat exchanger reception-transmission. Dvortsova, 20.
/14/. Act of heat exchanger reception-transmission. Dvortsova, 24.
/15/. Act of heat exchanger reception-transmission. Katerynicha, 1.
/16/. Act of heat exchanger reception-transmission. Katerynicha, 8.
/17/. Act of heat exchanger reception-transmission. Khmelnytskogo, 1.
/18/. Act of heat exchanger reception-transmission. Khmelnytskogo, 12.
/19/. Act of heat exchanger reception-transmission. Khmelnytskogo, 2.
/20/. Act of heat exchanger reception-transmission. Khmelnytskogo, 3.
/21/. Act of heat exchanger reception-transmission. Lenina, 12.
/22/. Act of heat exchanger reception-transmission. Lenina, 22.
/23/. Act of heat exchanger reception-transmission. Lenina, 24.
/24/. Act of heat exchanger reception-transmission. Marata, 12.
/25/. Act of heat exchanger reception-transmission. Marata, 6.
/26/. Act of heat exchanger reception-transmission. Mashinostroiteley, 10.
/27/. Act of heat exchanger reception-transmission. Mira, 9.
/28/. Act of heat exchanger reception-transmission. Parkova, 8.
/29/. Act of heat exchanger reception-transmission. Shkadinova, 36.
/30/. Act of heat exchanger reception-transmission. Shkadinova, 42.
/31/. Act of heat exchanger reception-transmission. Shkadinova, 51.
/32/. Act of heat exchanger reception-transmission. Shkadinova, 52.
/33/. Act of heat exchanger reception-transmission. Socialisticheskaya, 34.
/34/. Act of heat exchanger reception-transmission. Voznesenskogo, 16.
/35/. Act of heat exchanger reception-transmission. Yuzhnaya, 11.
/36/. Act of reception-transmission of equipment from major repairs.
/37/. Calculation of economic efficiency of modernization abovebracer seal in running part CVP turbines type PT-60-90/13 LMZ for the purpose of turbo-installation economy increase
/38/. Certificate of attestation of laboratory. Dated: 14.02.2008. #VL-682/08
/39/. Certificate of measuring facilities working instrument calibration. #1080/08.
/40/. Certificate of measuring working device calibration #02/03-458 dated 16.11.2007.
/41/. Certificate of measuring working device calibration #02/03-491 dated 16.11.2007.
/42/. Certificate of state metrological certification #02/02-188-2007 dated 15.08.2007.
/43/. Certificate of state metrological certification #02/02-191-2007 dated 16.08.2007.

/44/. Certificate of state metrological certification #02/02-228-2007 dated 03.09.2007.
/45/. Certificate of state metrological certification #02/02-231-2007 dated 03.09.2007.
/46/. Certificate of state metrological certification #02/02-233-2007 dated 03.09.2007.
/47/. Certificate of state metrological certification #02/02-235-2007 dated 03.09.2007.
/48/. Certificate of state metrological certification #02/02-344-2007 dated 14.08.2007.
/49/. Certificate of state metrological certification #02/02-357-2007 dated 16.08.2007.
/50/. Certificate of state metrological certification #02/02-359-2007 dated 16.08.2007.
/51/. Certificate of state metrological certification #02/02-451-2007 dated 02.11.2007.
/52/. Certificate of state metrological certification #02/02-455-2007 dated 30.08.2007.
/53/. Contract #2. Dated 02.04.2009.
/54/. Delivery act #674. Dated 27.05.2009.
/55/. Delivery act #686. Dated 30.05.2009.
/56/. Explanation note, modernization of the ash-trench system
/57/. Instruction of turbines maintenance. Type PT-60-90/13.
/58/. Log-book for the recording of the boilers rounds of measuring laboratory fuel group.
/59/. Log-book of anti-wreck training CETKO.
/60/. Log-book of fuel movement.
/61/. Log-book of knowledge verification protocols
/62/. Log-book of quality control of hard fuel
/63/. Log-book of solid fuel quality.
/64/. Log-book of staff CETKO training at 2009 year.
/65/. Log-book of the fineness of measuring laboratory fuel group
/66/. Manual of exploitation of electric power commercial record automated system
/67/. Monitoring Report on control of the legal pollutant emission.
/68/. Order #3 dated 05.01.2009 about creation of commission for knowledge's verification
/69/. Order #92. Dated 27.03.2009.
/70/. Passport of heat exchanger NN #08TO-16.
/71/. Passport of heat exchanger NN #14TO-16.
/72/. Passport of heat exchanger TPR-14,2-PN10/1-30-TKTM67(29)/TLA(19). Serial number #38224.
/73/. Passport, electric meter ACE3000.
/74/. Passport, electric meter ACTARIS. Type SL761C071. Serial number #53000884.
/75/. Passport, electric meter MERKURIY 230AM-01. Serial number #01066478.
/76/. Passport, electronic-strain-gauge balance KNV2D2R.

/77/. Passport, thermal converter TSP Metran-206. Serial number #565546.
/78/. Passport, thermal converter TSP Metran-206. Serial number #565547.
/79/. Passport, vortex flow transducer IRVIS K300. Serial number 5672.
/80/. Passport, vortex flow transducer IRVIS K300. Serial number 5756.
/81/. Permit for atmospheric emissions from stationary sources #1412900000-12
/82/. Photo, area of heating main with damaged heat insulation.
/83/. Photo, electric meter ACTARIS SL7000. Type SL761B071.
/84/. Photo, electric meter ACTARIS SL7000. Type SL761B071. Serial number #36118853.
/85/. Photo, electric meter ACTARIS SL7000. Type SL761B071. Serial number #36148143.
/86/. Photo, electric meter ALFA. Serial number #01136198.
/87/. Photo, electric meter ALFA. Type A1R-3-00-C22-1. Serial number #01030362.
/88/. Photo, measuring system: heat meter SVTU-10M, temperature controller RT-2.
/89/. Photo, pump. Type PE-150-145-2.
/90/. Photos of boiler-house.
/91/. Photos of control room.
/92/. Photos, water-cooling tower.
/93/. Preliminary conclusion of stream boiler BKZ-160-100 PT reconstruction of Kramatorsk TEC «Kramatorskteploenergo» LLC operations modes adjusting
/94/. Preliminary request about specialists teaching «Kramatorskteploenergo» LLC 2010 year
/95/. Program of teaching on motor mechanic ash-pump house position.
/96/. Project design of boiler BKZ-160-100 PT #9 reconstruction of Kramatorsk TEC «Kramatorskteploenergo» LLC
/97/. Project design of modernization of turbine PT-60-90/13 flange coupling heating and cooling scheme of Kramatorsk TEC «Kramatorskteploenergo» LLC
/98/. Project design of technology of water-cooling tower #1 reconstruction of Kramatorsk TEC «Kramatorskteploenergo» LLC
/99/. Regime card of the boiler №6 type BKZ-160-100PT.
/100/. Regime card of the boiler №7 type BKZ-160-100PT.
/101/. Regime card of the boiler №9 type BKZ-160-100PT.
/102/. Report about results of fuel, heat and electric power used at 2008 year.
/103/. Report of heat power plant work at 2008 year.
/104/. Stream boiler BKZ-160-100 PT. Technical description and instruction on exploitation
/105/. Technical passport of track scales RS-150C13V1.
/106/. Technical project of automated system of electric power commercial record.

Persons interviewed:

List persons interviewed during the determination or persons that contributed with other information that are not included in the documents listed above.

/1/ Volodymyr Potapenko, Deputy Director General of «Kramatorskteploenergo» LLC, Plant Manager
/2/ Rinat Milushov, Deputy Plant Manager on exploitation and production

/3/ Andrey Gusev, Chief metrologist, Chief of production department

/4/ Vasiliy Didych, Chief ecologist, Deputy Director General of «Kramatorskteploenergo» LLC

/5/ Svetlana Zozulia, Chief manager HR

/6/ Viktoria Goncharova, Chief of development department

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APPENDIX A: DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Projects

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved	Kyoto Protocol Article 6.1 (a)	See CAR2. After finishing of project determination report, the PDD and Determination Report will be presented to National Environmental Investments Agency of Ukraine for receiving of the Letter of Approval. The Letter of Approval from the country - investor will be provided after	Table 2, Section A.5

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		approval of project by Ukraine. National Environmental Investment Agency of Ukraine 35, Urytskogo str. 03035 Kiev Ukraine Email: info.neia@gmail.com **Mr. Igor Lupaltsov** **Head** National Environmental Investment Agency of Ukraine Phone: +380 44 594 9111 Fax: +380 44 594 9115 Email: lupaltsov@ukr.net Global Carbon Markets Department of Energy and Climate Change 3 Whitehall Place London SW1A 2HD United Kingdom	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		Mr Chris Dodwell (dna@decc.gsi.gov.uk) Head of International Climate Change Division Phone: (+44) 0300 068 5423	
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)	OK	Table 2, Section B
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7	Kyoto Protocol Article 6.1 (c)	CAR1: There is no information about sponsor Party. This CAR1 was closed after PP indicated sponsor Party in the PDD version 2.2.	
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)	OK	
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	National Environmental Investment Agency of Ukraine	
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	The 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	Marrakech	This issue cannot be	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
and recorded in accordance with the modalities for the accounting of assigned amounts	Accords, JI Modalities, §21(b)/24	answered finally as it is out of the influence of the project participants. In the Initial Report submitted by Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) tCO2-e. (compare http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php)	
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	The designed system of the national registry has been outlined in the Initial Report (see link above). This issue is out of the influence of the project owner. The National Registry is not a direct requirement for project registration.	
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	OK	
10. The project design 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	16 July 09 - 16 Aug 09	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
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)	In Ukraine the Environmental Impact Assessment is regulated by the state norms DBN A.2.2.1-2003 "On the content and composition of documents assessing the environmental impacts during design and construction of production facilities, buildings or houses". Regular independent checks of the emission levels compliance with the acceptable limits are performed by "NPO Ekologia" (Donetsk). Results of the checks are issued in a standard form of a "Report on the check of compliance against the allowed volumes of atmospheric emissions". JSC "Kramatorskteploenergo" has received the permit for atmospheric emissions from stationary sources #1412900000-12 issued by the Ministry of Environment	Table 2, Section F

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		of Ukraine.	
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	OK	Table 2, Section B
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	OK	Table 2, Section B
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	OK	Table 2, Section B
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. Are project participants authorized by a Party involved	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	See CAR2. Conclusion is pending until Letters of Approval authorizing the project participants by Parties involved will be issued.	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1 Title of the project					
A.1.1. Is the title of the project activity presented?		DR	"Reconstruction of Kramatorsk heat and power plant"	OK	OK
A.1.2. Is the current version number of the document presented?		DR	version 2.2	OK	OK
A.1.3. Is the date when the document was completed presented?		DR	Dated August 28, 2009	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project activity included?		DR	The main goal of Joint implementation project "Reconstruction of Kramatorsk heat and power plant" is implementation of measures which will improve fuel consumption efficiency and will reduce own consumption of electric power by the plant what will result in GHG emissions reduction to the atmosphere.	OK	OK
A.2.2. Is it explained how the proposed project activity reduces greenhouse gas emissions?		DR	See section A.2 of the PDD. Greenhouse gas emissions will be reduce due implementation of measures which will improve fuel consumption efficiency and will reduce own consumption of electric power	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			by the plant what will result in GHG emissions reduction to the atmosphere.		
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?		DR	Ukraine (Host Party): «Kramatorskteploenergo» LLC CJSC "ContourGlobal Ukraine" Germany: GreenStream Network GmbH	OK	OK
A.3.2. Are project participants authorized by a Party involved?		DR	See section A.5.1 (CAR2) below	-	-
A.3.3. The data of the project participants are presented in tabular format?		DR	See section A.3 of the PDD	OK	OK
A.3.4. Is contact information provided in annex 1 of the PDD?		DR	See Annex 1 of the PDD	OK	OK
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?		DR	Ukraine (Host Party)	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)		DR	Ukraine	OK	OK
A.4.1.2. Region/State/Province etc.		DR	Donetsk Region.	OK	OK
A.4.1.3. City/Town/Community etc.		DR	Kramatorsk town, Donetsk Region	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the		DR	The map is not in English. See section	CL1	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
project. (This section should not exceed one page)			A.4.1.4 of the PDD		
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?		DR	See section A.4.2 of the PDD	OK	OK
A.4.2.2. 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?		DR	See section A.4.2 of the PDD	OK	OK
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?		DR	Please, clarify if the project technology is likely to be substituted by other or more efficient technologies within the project period.	CL2	OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?		DR	Please, clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	CL3	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?		DR	Please, clarify if the project makes provisions for meeting training and maintenance needs	CL4	OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)		DR	See section A.2.2 of the PDD	OK	OK
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?		DR	Total estimated amount of emissions reduction for which ERUs will be received (t CO2-eq.) during 2008 – 2017 is about: 679 182 tCO2eq.“	OK	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?		DR	The estimated annual reduction for the chosen credit period is about: 74404 tCO_2e	OK	OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?		DR	See section A.4.3.1 of the PDD.	OK	OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?		DR	There is no evidence of written project approvals by the Parties involved. Pending untill LoAs by Parties involved will be issued.	CAR2	-
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?		DR	ACM0002 Used version of the methodology ACM0002 (version 8) is not the latest one (version 10). Please clarify. Please, clarify purpose of usage of methodology AM0062. Provide references to items and formulas where is used	CL5 CL6	OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			methodology AM0062. There is no key information and data used to establish the baseline in provided this section (see GUIDELINES FOR USERS OF THE JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM Version 03)	CAR3	OK
B.1.2. Is it justified the choice of the applicable baseline for the project category?		DR	Please, specify the volumes of capital investments necessary for introduction of 4th and 5th alternative scenarios, and explain why the costs of the proposed actions are determined as extremely high.	CL7	OK
B.1.3. Is it described how the methodology is applied in the context of the project?		DR	The following aspects give the ability to use chosen methodology: • The proposed project makes the process of heat and power energy generation more effective; • The proposed project replaces generation of power energy generated within UES after the modernization.	OK	OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?		DR	Please, clarify the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)	CL8	OK
B.1.5. Is all literature and sources clearly referenced?		DR	See section B.1 of the PDD	OK	OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.2.1. Is the proposed project activity additional?		DR	The project additionality is presented with the use of the last version of "Instument for demonstration and assessment of additionality" (Version 5.2) according to the instructions given in CDM AM0062 methodology. See section B.2 of the PDD.	OK	OK
B.2.2. Is the baseline scenario described?		DR	Kramatorsk HPP will continue its operation with the existing capacities. The consumption of electric power for own needs of HPP will be supplied with existing equipment of Kramatyorsk HPP and other power plants connected to the United Energy System (UES) of Ukraine.	OK	OK
B.2.3. Is the project scenario described?		DR	Within the proposed project the following measures will be implemented: reconstruction of turbines, boilers and cooling tower, installation of frequency controllers, rehabilitation of district heating system of the town.	OK	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario incluede?		DR	See section A.2.2 above	OK	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?		DR	It is stated that continuing operation is the most likely baseline scenario.	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?		DR	At this moment the general practice in energy sector of Ukraine is operation of existing equipment without implementation	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			of large scale modernization projects. It's connected with limited access to the financial resources and also risks of new equipment installation.		
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?		DR	See section B.3 (figure 3) of the PDD	OK	OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?		DR	Please present the date of completing in the DD/MM/YYYY format.	CAR4	OK
B.4.2. Is the contact information provided?		DR	Names/titles of persons/organizations, which determine baseline: • «ContourGlobal» • «Kramatorskteploenergo» LLC • GreenStream Network See annex 1 of the PDD	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	See annex 1 of the PDD	OK	OK
C. Duration of the small-scale project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?		DR	Year 2007	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?		DR	Please, provide the project's operational lifetime in years and months	CAR5	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?		DR	Please, provide the length of the crediting period in years and months	CAR6	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?		DR	Please, clarify how methodology was used for determined monitoring plan?	CL9	OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.		DR	Refer to section D.1 of PDD	OK	OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.		DR	Refer to section D.1.1.1 of PDD	OK	OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Refer to section D.1.1.2 of PDD	OK	OK
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.		DR	Refer to section D.1.1.3 of PDD	OK	OK
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Refer to section D.1.1.4 of PDD	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)		DR	N/A	OK	OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.		DR	N/A	OK	OK
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc,; emissions/emission reductions in units of CO2 equivalent).		DR	N/A	OK	OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.		DR	N/A	OK	OK
D.1.11.Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Leakage is not expected. Plese, clarify why leakage is not expected.	CL10	OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Refer to section D.1.4 of PDD	OK	OK
D.1.13.Is information on the collection and archiving of information on the environmental impacts of the project provided?		DR, I	Information on the collection and archiving of information on the environmental impacts of the project is not provided (see section D.1.5 of PDD)	CAR7	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?		DR, I	Please, provide reference to the relevant host Party regulation(s)	CL11	OK
D.1.15. If not applicable, is it stated so?		DR,	Reference to section D.1.14 (CL11) above	-	-

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
		I			
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?		DR	See section D.2 (table 12) of the PDD	OK	OK
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project activity		DR	See section D.3 of the PDD	OK	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?		DR	«ContourGlobal» «Kramatorskteploenergo» LLC GreenStream Network See Annex 1 of the PDD	OK	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	See Annex 1 of the PDD	OK	OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due the project?		DR	See section D.1.1.2 of the PDD	OK	OK
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?		DR	Please clarify source of the formulae that used to estimate anthropogenic emissions by source of GHGs due the project	CL12	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?		DR	Please clarify if conservative assumptions are used to calculate project GHG emissions	CL13	OK
E.2. Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?		DR	Leakage is not expected.	OK	OK
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?		DR	Refer to E.2.1 above.	-	-
E.2.3. Have conservative assumptions been used to calculate leakage?		DR	Refer to E.2.1 above.	-	-
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1 and E.2 represent the project activity emissions?		DR	Refer to E.2.1 above.	-	
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?		DR	Refer to D.1.1.4 and E.1 of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified in for the applicable project category?		DR	Refer to D.1.1.4 and E.1 of the PDD.	OK	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?		DR	Please clarify if conservative assumptions are used to calculate baseline GHG emissions	CL14	OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?		DR	Refer to E.5 of the PDD.	OK	OK
E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?		DR	Table presented in section E.6 of the PDD	OK	OK
F. Environmental Impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?		DR, I	Section F.1 of PDD gives sufficient environment impact analysis description.	OK	OK
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?		DR, I	Please, clarify if are any requirements for an Environmental Impact Assessment (EIA)?	CL15	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
F.1.3. Are the requirements of the National Focal Point being met?		DR, I	The National Focal Point issued Letter of Endorsement.	OK	OK
F.1.4. Will the project create any adverse environmental effects?		DR, I	Adverse environmental effects are not expected.	OK	OK
F.1.5. Are transboundary environmental considered in the analysis?		DR, I	Transboundary effects are not considered (no effect can be deduced only). Please, explain why the project has no transboundary impact.	CAR8	OK
F.1.6. Have identified environmental impacts been addressed in the project design?		DR, I	Please clarify if identified environmental impacts been addressed in the project design	OK	OK
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?		DR	Section G.1 of PDD	OK	OK
G.1.2. The nature of comments is provided?		DR	Section G.1 of PDD	OK	OK
G.1.3. Has due account been taken of any stakeholder comments received?		DR	A summary of project has been submitted to Kramatorsk City Council at the stage of the PDD development. The response of the City Council is attached in Annex 4 of the PDD.	OK	OK

Table 3 Baseline and Monitoring Methodologies: Own format

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Baseline Methodology					
1. 1. General					
1.1.1. Does the baseline cover emissions from all gases, sectors and source categories listed in Annex A, and anthropogenic removals by sinks, within the project boundary?		DR I	Section B.3 of the PDD establishes project boundaries. Only CO2 emissions are taken into account by the project.	OK	OK
1.1.2. Is baseline established on a project-specific basis and/or using a multi-project emission factor?		DR I	A multi-project emission factor is used for baseline establishing.	OK	OK
1.1.3 Is baseline established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?		DR I	See items B.1.1 (CL5, CL6, CAR3), B.1.2 (CL7), B.1.4 (CL8) above	-	-
1.1.4 Is baseline established taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector?		DR	Applicable local laws and regulations are taken into account. Economic situation in the project sector is taken into account (Sections B.1. and B.2. of the PDD)	OK	OK
1.1.5 Is baseline established in such a way that ERUs cannot be earned for decreases in activity levels outside the project activity or due to *force majeure?*		DR I	Baseline does not envisage earning ERUs for activity level decrease outside the project or due to *force majeure.*	OK	OK
1.1.6 Is baseline established taking account of uncertainties and using conservative assumptions?		DR I	See items E.1.3 (CL13) above	-	-
1.2. Additionality					
1.2.1. Was the additionality of the project activity demonstrated and assessed?		DR	See section B.2.1 above	-	-

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2. Monitoring Methodology					
2.1. Monitoring plan					
2.1.1. Is a monitoring plan included?		DR I	Yes, monitoring plan is included.	OK	OK
2.1.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources and/or anthropogenic removals by sinks of greenhouse gases occurring within the project boundary during the crediting period?		DR I	Refer to section D.1.1.1 of PDD	OK	OK
2.1.3. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline of anthropogenic emissions by sources and/or anthropogenic removals by sinks of greenhouse gases within the project boundary during the crediting period?		DR I	Refer to section D.1.1.3 of PDD	OK	OK
2.1.4. Does the monitoring plan provide for the identification of all potential sources of, and the collection and archiving of data on increased anthropogenic emissions by sources and/or reduced anthropogenic removals by sinks of greenhouse gases outside the project boundary that are significant and reasonably attributable to the project during the crediting period?		DR	Increase of anthropogenic emissions outside the project boundary that are significant and reasonably attributable to the project during the crediting period is not anticipated.	OK	OK
2.1.5. Does the project boundary encompass all anthropogenic emissions by sources and/or removals by sinks of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the JI project?		DR	Significant anthropogenic emissions by sources and/or removals by sinks of greenhouse gases under the control of the project participants are not envisaged by the project. Validated onsite.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1.6. Does the monitoring plan provide for the collection and archiving of information on environmental impacts, in accordance with procedures as required by the host Party, where applicable?		DR	No adverse environmental impacts are foreseen. Validated onsite.	OK	OK
2.1.7. Does the monitoring plan provide for quality assurance and control procedures for the monitoring process?		DR	See section D.2 table 12 of the PDD	OK	OK
2.1.8. Does the monitoring plan provide for procedures for the periodic calculation of the reductions of anthropogenic emissions by sources and/or enhancements of anthropogenic removals by sinks by the proposed JI project, and for leakage effects, if any?		DR I	The monitoring plan provides formulae for the periodic calculation of the reductions of anthropogenic emissions (see section D.1.1.2.). Leakage is not applicable.	OK	OK
2.1.9. Does the monitoring plan provide for documentation of all steps involved in the calculations?		DR I	The monitoring plan provide for documentation of all steps involved in the calculations. See section D.	OK	OK
2.2. Quality Control (QC) and Quality Assurance (QA) Procedures					
2.2.1. Did all measurements use calibrated measurement equipment that is regularly checked for its functioning?		DR I	Control of the measuring equipment is implemented and followed, that was validated onsite.	OK	OK
2.2.2 Is frequency of monitoring the parameters defined?		DR I	Frequency of monitoring the parameters is defined.	OK	OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?		DR, I	Proposed project activity is not capital construction. Please clarify in PDD is the project activity environmentally licensed by the competent authority	CL16	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?		DR, I	JSC "Kramatorskteploenergo" are there represented the permit for atmospheric emissions from stationary sources #1412900000-12. Please clarify in PDD if conditions of the environmental permit?	CL17	OK
1.3. Is the project in line with relevant legislation and plans in the host country?		DR, I	See items 1.1 (CL17) and 1.2 (CL18) above	-	-

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request 1 (CAR1): There is no information about sponsor Party.	Table 1, checklist question 3	Sponsor Party was identified. PDD was amended, see page 4.	PDD version 2.2 was checked. CAR1 is closed.
Corrective Action Request 2 (CAR2): There is no evidence of written project approvals by the Parties involved	Table 2, checklist question A.5.1	Additional information on approval by Parties was added to Section A.5. After finishing of project determination report, the PDD and Determination Report will be presented to National Environmental Investments Agency of Ukraine for receiving of the Letter of Approval. The Letter of Approval from the country - investor will be provided after approval of project by Ukraine. National Environmental Investment Agency of Ukraine 35, Urytskogo str. 03035 Kiev Ukraine Email: info.neia@gmail.com **Mr. Igor Lupaltsov**	This CAR will be closed after report finalizing

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		Head National Environmental Investment Agency of Ukraine Phone: +380 44 594 9111 Fax: +380 44 594 9115 Email: lupaltsov@ukr.net Global Carbon Markets Department of Energy and Climate Change 3 Whitehall Place London SW1A 2HD United Kingdom Mr Chris Dodwell (dna@decc.gsi.gov.uk) Head of International Climate Change Division Phone: (+44) 0300 068 5423	
Corrective Action Request 3 (CAR3): There is no key information and data used to establish the baseline in provided this section (see GUIDELINES FOR USERS OF THE JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM Version 03)	Table 2, checklist question B.1.1	The key information and data used for identification of the baseline by the methodology ACM0002 (version10) is written in according to the Guidelines for users of the Joint implementation project design document form. A link to the key baseline parameters (section D 1.1.3 Table 6) has	PDD version 2.2 was checked. CAR is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		been added to the Section D. Please see pages 16, 21.	
Corrective Action Request 4 (CAR4): Please present the date of completing in the DD/MM/YYYY format.	Table 2, checklist question B.4.1	The date of completion of baseline study: 01/04/2009. PDD was amended, see page 27 of the PDD.	PDD version 2.2 was checked. CAR is closed.
Corrective Action Request 5 (CAR5): Please, provide the project's operational lifetime in years and months	Table 2, checklist question C.2.1	The length of project's operational lifetime is 120 months/10 years of project lifetime. PDD was amended, see page 27 of the PDD.	PDD version 2.2 was checked. CAR is closed.
Corrective Action Request 6 (CAR6): Please, provide the length of the crediting period in years and months	Table 2, checklist question C.3.1	The length of crediting period is 120 months / 10 years of project lifetime. PDD was amended, see page 27 of the PDD.	PDD version 2.2 was checked. CAR is closed.
Corrective Action Request 7 (CAR7): Information on the collection and archiving of information on the environmental impacts of the project is not provided	Table 2, checklist question D.1.13	Environmental indicators such as dust emissions, NOx, or SOx will be available to the verifier. These indicators are being reported to the authorities of Donetsk region on a monthly and annual basis. PDD was amended, see page 29 of the PDD.	Reports of dust emissions, NOx, SOx are checked and listed in Determination Report. CAR is closed
Corrective Action Request 8 (CAR8): Transboundary effects are not considered (no effect can be deduced only).	Table 2, checklist question	The transboundary impacts as defined in the text of the Convention on Long-range Transboundary Air Pollution ratified by	PDD version 2.2 was checked. CAR is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please, explain why the project has no transboundary impact.	F.1.5	Ukraine will not occur due to the project activities.. PDD was amended, see page 54 of the PDD.	
Clarification Request 1 (CL1): The map is not in English. See section A.4.1.4 of the PDD	Table 2, checklist question A.4.1.4	The map is modified. PDD was amended, see page 2 of PDD.	PDD version 2.2 was checked. CL is closed.
Clarification Request 2 (CL2): Please, clarify if the project technology is likely to be substituted by other or more efficient technologies within the project period.	Table 2, checklist question A.4.2.3	The changes into the list of reconstruction measures are not envisaged. PDD was amended, see page 12 of the PDD.	PDD version 2.2 was checked. CL is closed.
Clarification Request 3 (CL3): Please, clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	Table 2, checklist question A.4.2.4	The staff members of 'Kramatorskteploenergo' LLC were trained to operate the new equipment installed at the Kramatorsk power plant. The cost of training was 21 ths. UAH. PDD was amended, see page 12 of the PDD.	«Kramatorskteploenergo» LLC presented acts, orders and log-books on trainings and knowledge verifications of personal. They are listed in Determination Report. CL is closed
Clarification Request 4 (CL4): Please, clarify if the project makes provisions for meeting training and maintenance needs	Table 2, checklist question A.4.2.5	Personnel training is necessary. PDD was amended, see page 12 of the PDD.	PDD version 2.2 was checked. CL is closed.
Clarification Request 5 (CL5): Used version of the methodology ACM0002	Table 2, checklist	The methodology ACM0002 (version 10) was used. PDD was amended, see page 16 of the	PDD version 2.2 was checked. CL is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
(version 8) is not the latest one (version 10). Please clarify.	question B.1.1	PDD.	
Clarification Request 6 (CL6): Please, clarify purpose of usage of methodology AM0062. Provide references to items and formulas where is used methodology AM0062.	Table 2, checklist question B.1.1	The "Combined tool to identify the baseline scenario and demonstrate additionality" version 02.2 (as suggested in the ACM0062 methodology) was used for baseline setting and additionality analysis.	Explanations were provided in the PDD version 2.2. PDD version 2.2 was checked. CAR is closed.
Clarification Request 7 (CL7): Please, specify the volumes of capital investments necessary for introduction of 4th and 5th alternative scenarios, and explain why the costs of the proposed actions are determined as extremely high.	Table 2, checklist question B.1.2	Estimated cost of measures proposed in 4-th alternative variant is 500 mln. dollars. Estimated cost of measures proposed in 5-th alternative variant is 500 mln. dollars. The cost is defined as extremely high because in 2009 the total income of Kramatorsk city budget (the city is a major stakeholder of Kramatorsk HPP) is expected to be 403.2 mln. UAH. PDD was amended, see page 20 of the PDD.	PDD version 2.2 was checked. CL is closed.
Clarification Request 8 (CL8): Please, clarify the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)	Table 2, checklist question B.1.4	The main assumptions of the baseline methodology ACM0002 (version 10) were added in part B.1. PDD was amended, see page 16 of the PDD.	The basic assumptions were provided to PDD. CL is closed
Clarification Request 9 (CL9): Please, clarify how methodology was used	Table 2, checklist	Monitoring plan was developed according to the approved methodology of baseline and	PDD version 2.2 was checked CL is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
for determined monitoring plan?	question D.1.1	monitoring ACM0002 «Consolidated baseline methodology for grid electricity generated from renewable sources" (version 10). PDD was amended, see page 28 of the PDD.	
Clarification Request 10 (CL10): Plese, clarify why leakage is not expected.	Table 2, checklist question D.1.11	The proposed JI project results in the decrease of consumption of natural gas and coal. The reduction of fossil fuel consumption may lead to decreasing the emissions from the related sources, such as coal transportation via railroad, or natural gas transportation by pipelines. Therefore, the only leakage that could be expected in relation with the proposed JI project, would be negative (emission reduction decrease outside of the boundaries set). The possible leakage in the project was considered to be zero. This is a conservative assumption. PDD was amended, see page 43 of the PDD.	PDD version 2.2 was checked. CL is closed.
Clarification Request 11 (CL11): Please, provide reference to the relevant host Party regulation(s)	Table 2, checklist question D.1.14	The main Laws of Ukraine used during the project implementation at Kramatorsk HPP are listed. PDD was amended, see page 29 of the PDD.	PDD version 2.2 was checked. CL is closed
Clarification Request 12 (CL12): Please clarify source of the formulae that used to estimate anthropogenic emissions by	Table 2, checklist question	The formulae for GHG emissions calculation are taken from the following methodologies: ACM0002 «Consolidated baseline	PDD version 2.2 was checked. CL is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
source of GHGs due the project	E.1.2	methodology for grid electricity generated from renewable sources" (version 10); methodology described in PDD of JI project "Rehabilitation of district heating system in Chernigiv region". PDD was amended, see page 16 of the PDD.	
Clarification Request 13 (CL13): Please clarify if conservative assumptions are used to calculate project GHG emissions	Table 2, checklist question E.1.3	The conservative assumptions for calculation of GHG emissions in the project are listed. PDD was amended, see page 51 of the PDD.	PDD version 2.2 was checked. All conservative assumptions for calculation of GHG emissions in the project period were provided in PDD. CL is closed.
Clarification Request 14 (CL14): Please clarify if conservative assumptions are used to calculate baseline GHG emissions	Table 2, checklist question E.4.3	The conservative assumptions for calculation of GHG emissions in the baseline are listed. PDD was amended, see page 51.	PDD version 2.2 was checked. CL is closed.
Clarification Request 15 (CL15): Please, clarify if are any requirements for an Environmental Impact Assessment (EIA)?	Table 2, checklist question F.1.2	Considering that the project does not foresee commissioning of any new equipment, but only reconstruction of existing equipment, the Assessment of Environmental impacts is not required. PDD was amended, see page 54 of the PDD.	It was checked during site visit that the proposed project activity includes only reconstruction of existing equipment such as boilers, water-cooling tower etc. and don't foresee commissioning of any new equipment. CL is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request 16 (CL16): Please clarify is the project activity environmentally licensed by the competent authority	Table 4, checklist question 1.1	Considering that the project's measures do not involve capital construction and do not lead to increase of harmful emissions, the assessment by local environmental inspection or other relevant bodies is not required. PDD was amended, see page 54 of the PDD.	PDD version 2.2 was checked. CL is closed.
Clarification Request 17 (CL17): Please clarify in PDD are there conditions of the environmental permit?	Table 4, checklist question 1.2	JSC "Kramatorskteploenergo" has received the permit for atmospheric emissions from stationary sources #1412900000-12 issued by the Ministry of Environment of Ukraine. The emissions of hazardous substances at the enterprise are within the limits specified in the emission permit. PDD was amended, see page 54 of the PDD.	Supporting documents were analysed, they are listed in Determination Report.. PDD version 2.2 was checked. CL is closed.

Appendix B: Verifiers CV's

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Team Leader, Climate Change Lead Verifier.
Bureau Veritas Ukraine HSE Department manager.
He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 130 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the validation of 3 JI projects.

Nadiya Kaiiun, M. Sci. (environmental science)
Climate Change Verifier
Bureau Veritas Ukraine HSE Department project manager.
She has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered). She performed over 15 audits since 2008. She has undergone intensive training on Clean Development Mechanism /Joint Implementation and she is involved in the validation of 6 JI projects.

Oleg Skoblyk, Specialist (Energy Management)
Climate Change Verifier
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Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier for GHG

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