DETERMINATION REPORT

COMMERCIAL UTILITY ENTERPRISE "DONETSKMISKTEPLOMERZHA "

DETERMINATION OF THE "REHABILITATION OF THE DISTRICT HEATING SYSTEM IN DONETSK CITY"

REPORT NO. UKRAINE/0142/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE/0142/2010

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"REHABILITATION OF THE DISTRICT HEATING SYSTEM IN DONETSK CITY"

Date of first issue:	Organizational unit:
20/10/2010	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
Commercial Utility Enterprise "Donetskmiskteplomerezha "	Viktor Rogachov

Summary:

Bureau Veritas Certification has made the determination of the "Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha " located in Donetsk city, Ukraine, 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 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/0142/2010	JI

Project title:
"Rehabilitation of the District Heating System in Donetsk City"

Work carried out by:
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1 INTRODUCTION

Commercial Utility Enterprise "Donetskmiskteplomerezha" has commissioned Bureau Veritas Certification to determinate its JI project "Rehabilitation of the District Heating System in Donetsk City" (hereafter called "the project") in Donetsk city, Ukraine.

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.

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 (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is 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 emissions reductions 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 Determination team

The determination team consists of the following personnel:

Oleg Skoblyk
Bureau Veritas Certification Team Leader, Climate Change Verifier Technical Specialist

Svitlana Gariyenchyk
Bureau Veritas Certification Team Member, Climate Change Verifier

Denis Pishchalov

Bureau Veritas Certification, Financial Specialist

Ivan Sokolov

Bureau Veritas Certification, Internal Technical Reviewer

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 version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent validation process where the determiner will document how a particular requirement has been determined and the result of the determination.

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by Commercial Utility Enterprise "Donetskmiskteplomerezha" and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by a Accredited Independent Entity were reviewed.

PDD "Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha" version 01 was submitted on 16/07/2010.

To address Bureau Veritas Certification corrective action and clarification requests following the site visit, the project participants issued a new PDD version dated 24/09/2010.

To address Bureau Veritas Certification further corrective action and clarification requests, Commercial Utility Enterprise

"Donetskmiskteplomerezha" revised the PDD and resubmitted it on18/10/2010, the latter PDD version 03 is considered final.

The determination findings presented in this report relate to the project as described in the PDD versions 01, 02, 03.

2.2 Follow-up Interviews

On August 12-13, 2010 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Commercial Utility Enterprise "Donetskmiskteplomerezha" and VEMA S.A. Company were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Commercial Utility Enterprise "Donetskmiskteplomerezha "	➢ Implementation schedule ➢ Project management organisation ➢ Evidence and records on reconstruction and new equipment and its operation ➢ Environmental Impact Assessment ➢ Project monitoring responsibilities ➢ Monitoring equipment ➢ Quality control and quality assurance procedures ➢ Environmental impacts affected ➢ Local authorities and public opinion
CONSULTANT VEMA S.A. Company	➢ Applicability of methodology ➢ Baseline and Project scenarios ➢ Barriers analysis ➢ Additionality justification ➢ Common practice analysis ➢ Monitoring plan ➢ Conformity of PDD to JI requirements

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.

Corrective Action Requests (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
(b) The JI requirements have not been met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

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

3 DETERMINATION CONCLUSIONS

In the following sections, the conclusions of the determination are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Determination Protocol in Appendix A.

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 36 Corrective Action Requests and 13 Clarification Requests.

3.1 Project approvals by Parties involved (19-20)

The project has already been supported by the Government of Ukraine, namely by the National Environmental Investment Agency of Ukraine, which has issued a Letter of Endorsement for the JI Project (24.09.2010 №1458/23/7). Bureau Veritas Certification received this letter from the project participants and does not doubt its authenticity.
After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the National Environmental Investment Agency of Ukraine for receiving a Letter of Approval.

3.2 Authorization of project participants by Parties involved (21)

The participation for the Commercial Utility Enterprise "Donetskmiskteplomerezha" listed as project participant in the PDD is authorized by the National Environmental Investment Agency of Ukraine through its written project support explicitly stating the name of the legal entity.

3.3 Baseline setting (22-26)

The PDD explicitly indicates that JI specific approach was the selected approach for identifying the baseline. It has been elaborated Institute of Engineering Ecology of Ukraine, approved by the International Academy of the Environment and applied in JI projects "Rehabilitation of the District Heating System in Donetsk City", "Rehabilitation of the District Heating System in Chernigiv city», "Rehabilitation of the District Heating System in Crimea» and "Rehabilitation of the District Heating System in Kharkiv City», which received their final determination at JISC.

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:

   a. "Business as usual" with minimum reconstruction works;
   b. Rehabilitation of the District Heating System in Donetsk City without Joint Implementation mechanism;
   c. Exclusion of the non-key type activity such as, for example, elimination of frequency controllers, etc., installation from the project.

(b) 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. In this context, the following key factors that affect a baseline are taken into account:

- high priority of heat supply sector for the national energy saving policy declared by the Ukrainian Government of Ukraine and stated in the State Program of Communal Economics Restructuring and Development for 2004-2010 (Ukrainian Law "On heat supply" No. 2479-VI from 09.07.2010), Ukrainian Law "On energy saving" No. 74/94-VR from 01.07.1994 and Ukrainian Law "About amendments to the Ukrainian Law "On energy saving" No. 1026-V from 16.05.2007. New Law of Ukraine "On heat supply" No. 2633-IV from 02.06.2005 which regulate relations on the heat supply market and stipulates for the implementation of energy saving measures and more efficient technologies.
- high price of the fuel, in particular natural gas which is nearly 95 % of fuel type used in Ukraine for the needs of the municipal heat supply;
- the amount of fuel consumption is calculated for the conditions in which normative parameters of heat and hot water supply are provided. Implementation of continuous monitoring of its quality

(measurement of internal temperature in the specific buildings as well as registration of residents' complaints for the poor-quality heat supply) is foreseen. This increases the control for the qualitative heat supply for the consumers and excludes deliberate reduction of heat consumption, and, in such a way, of fuel consumption with the purpose of increasing generation of GHG emissions reduction units;

- lack of monitoring devices for heat and heat-carrier consumption in the municipal boiler-houses presents the main complication for implementation of the JI projects on district heating in Ukraine. In this context, and taking into consideration essential load changes in the boilers, constant fuel consumption measurement taken by the highly accurate measurement equipment, provides for more its more exact measurement

3.4 Additionality (27-31)

Traceable and transparent information that an AIE has already positively determined that a comparable implemented under comparable circumstances (same GHG mitigation measure, same country, similar technology, similar scale) would result in a reduction of anthropogenic emissions by sources that is additional to any that would otherwise occur and a justification why this determination is relevant for the project at hand was provided. At present, in addition to this project there are at least 4 Projects of Heat Supply Systems Rehabilitation with application of JI mechanisms in Ukraine: Heat Supply Systems in Chernigiv region, Donetsk region, Autonomous Republic of Crimea and Kharkiv city.

The most recent version of the "Tool for the demonstration and assessment of additionality" (version 05.2) approved by the CDM Executive Board was used. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

The following additionality proofs are provided:

1. there are three alternative scenarios to the project activity identified;
2. the investment analyses conducted by the project participants determines that the proposed project activity is not economically and financially feasible;
3. the identified financial, technological and organisational barriers would credibly prevent the implementation of the proposed project activity undertaken without being registered as a JI activity;
4. the common practice analyses carried out by the PP's, complementing the investment and barrier analysis

Additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

3.5 Project boundary (32-33)

The project boundary defined in the PDD, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants:

- CO2 emissions of boiler-houses belonging to Municipal commercial enterprise "Donetskmiskteplomerezha" in the process of fuel burning for heating and hot water supply;
- CO2 emissions related to electric energy production for electrical grid in the amount consumed by the boiler-houses for heat and hot water production, wherein energy-saving measures will be introduced;

(ii) Reasonably attributable to the project (CH4, N2O, NOx, CO), and

(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO2 equivalent, whichever is lower.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD

3.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 09/05/2004, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 20 years or 240 months.

The PDD states the length of the crediting period in years and months, which is 7 years or 84 months, and its starting date as 01/01/2005, which is the date the first emission reductions or enhancements of net removals are generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

3.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was the selected.

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as fuel saving.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as:

1. Fuel consumption by boiler-houses (Natural gas)
2. Heat value of natural gas
3. Average external temperature during heating season
4. Average internal temperature during heating season
5. Quantity of hot water supply consumers
6. Total Heating area
7. Average heat-transfer factor of the buildings in base year
8. Heating area of buildings (existed in base year) with improved heat insulation in reporting year
9. Heating area of new buildings connected to the heat supply system (it is conceded that such buildings have new improved heat insulation) in reporting year
10. Heat-transfer factor of the buildings with new thermal insulation
11. Duration of heating period
12. Duration of hot water supply period
13. Maximal connected load for heating services
14. Connected load for hot water supply
15. Standard specific discharge of hot water at personal account
16. CO2 emission factor
17. Conversion factor for average load within heating period
18. Electric energy consumption by the boiler-houses, wherein frequency regulation are planned

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"

developed by the JISC, such as BEY; PEY; EFCO2; EFCO2ELEC, y; GWP; EFNG; d; ECy

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as ; EFCO2; GWP; EFNG

(ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination, such as:

1. Average heat-transfer factor of the buildings in base year
2. Heat-transfer factor of the buildings with new thermal insulation
3. Standard specific discharge of hot water at personal account

(iii) Data and parameters that are monitored throughout the crediting period, such as:

1. Fuel consumption by boiler-houses (Natural gas)
2. Heat value of natural gas
3. Average external temperature during heating season
4. Average internal temperature during heating season
5. Quantity of hot water supply consumers
6. Total Heating area
7. Heating area of buildings (existed in base year) with improved heat insulation in reporting year
8. Heating area of new buildings connected to the heat supply system (it is conceded that such buildings have new improved heat insulation) in reporting year
9. Duration of heating period
10. Duration of hot water supply period
11. Maximal connected load for heating services
12. Connected load for hot water supply
13. Conversion factor for average load within heating period
14. Electric energy consumption by the boiler-houses, wherein frequency regulation are planned

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording depending on its kind. It is provided in comprehensive manner in Tables for the key-parameters in Section B.1. of the PDD.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project

emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate, such as:

Formula 1 – Quantity of emission reduction units (ERUs)	
	ERUs = □[Eib - Eir]; [t CO2e]
	ERUs - Quantity of emission reduction units (ERUs), [t CO2e] Ebi –Baseline CO2 emissions [t CO2e] Eri - CO2 emissions in reporting year[t CO2e]
	The sum for all boiler-houses (i) involved in project.

Project emissions

Formula 2 –CO2 emissions in reporting year (Er)	
	Eir = E1ir + Econs ir ; [t CO2e]
	E1ir – CO2 emissions due to fuel consumption for heating and hot water supply to (i) boiler-houses in reporting year, t CO2e Econs ir – CO2 emissions due to electric energy consumption from network by the boiler-house (i) in reporting year, t CO2e

Formula 3 – CO2 emissions due to fuel consumption for heating and hot water supply to (i) boiler-houses in reporting year, (E1ir)	
	E1ir = LHVr* Cef*Bri , [tCO2-eq.]
	Br(i) – fuel consumption in project scenario by (i) boiler-house (for each type of fuel), 1000 m3 (t); LHVr(i) – the lowest heat value for each type of fuel, MJ/m3(MJ/kg); Cef- – Carbon emission factor for each type of fuel, Kt CO2/KJ.

Formula 4 – CO2 emissions due to electric energy consumption from network by the boiler-house (i) in reporting year, (Econs ir).	
	Econs ir = Pr*CEF
	Pr – project consumption of electric energy by the boiler-houses, wherein energy-saving technologies will be implemented, MWt*hour; CEF – K Carbon emission factor in the course of electric energy consumption decrease, t CO2e/MWt.

Baseline emissions

Formula 5 – Annual baseline emissions (Eb)	
	Eib = E1ib + Econs ib; [t CO2e]
	E1ib – CO2 emissions due to fuel consumption for heating and hot water supply to (i) boiler-houses in basic year, t CO2e Econs ib – CO2 emissions due to electric energy consumption from network by the boiler-house (i) in basic year, t CO2e

Formula 6 – CO2 emissions due to fuel consumption for heating and hot water supply to (i) boiler-houses in basic year, (E1ib)	
	If there was hot water supply in basic year (regardless of service duration, (1-ab) ≠ 0), the following formula for E1b shall be applied: E1b = LHVb*Cef*[Bb*ab*K1*Kh + Bb*(1-ab)*K1*Kw], where the first value within brackets describes fuel consumption for heating, and the second value represents fuel consumption for hot water supply. If there was not hot water supply in basic year ((1-ab) = 0), and such service appeared in reporting year (owing to improvement of hot water supply to population), the following formula for E1b shall be applied: E1b = LHVb*Cefb*[Bb*ab*K1*Kh + Br *(1-ar)*K1*Kw0]
	LHVb – the lowest heat value in basic year, MJ/m3 (MJ/kg); Cef – CO2 emission factor, KtCO2/TJ; Bb – quantity of consumed fuel in basic year, 1000 m3 or tons; K1, Kh = K2* K3* K4; Kw = K5 * K6 * K7 – adjusting factors; ab – share of fuel (heat) consumed for heating in basic year; (1-ab) – share of fuel (heat) consumed for hot water supply in basic year; ar – share of fuel (heat) consumed for hot water supply in reporting year.

Formula 7 – share of fuel (heat) consumed for hot water supply in basic year (ab)	
	ab= Lh, b*q*N h, b/ (Lh, b*g*N h, b+Lw, b*Nw, b);
	Lh, b – maximal load for rendering services as to heating in basic year, MWt; Lw, b – maximal load for rendering services as to hot water supply in basic year, MWt; g – conversion factor for average heating load during the heating period (usually 0.4-0.8); N h, b – duration of heating period in basic year, hour.

	Nw, b – duration of hot water supply period in basic year, hour.

Formula 8 – share of fuel (heat) consumed for hot water supply in reporting year (ar)	
	ar= Lh, r*q*N h, r/ (Lh, r*g*N h, r+Lw, r*Nw, r)
	Lh, r – maximal load for rendering services as to heating in reporting year, MWt; Lw, r – maximal load for rendering services as to hot water supply in reporting year, MWt; g – conversion factor for average heating load during the heating period (usually 0.4-0.8);; N h, r – duration of heating period in reporting year, hour. Nw, r – duration of hot water supply period in reporting year, hour.

Formula 9 – Factor of the lowest heat value change (K1)	
	K1=LHVb/LHVr
	LHVb – average lowest heat value in basic year, MJ/m3 (MJ/kg); LHVr – average lowest heat value in reporting year, MJ/m3 (MJ/kg);

Formula 10 – Temperature change factor (K2)	
	K2 = (Tin r - Tout r) / (Tin b - Tout b)
	Tin r – average temperature inside the premises during heating period in reporting year, K (or 0C); Tin b – average temperature inside the premises during heating period in basic year, K (or 0C); Tout r – average external temperature during heating period in reporting year, K (or 0C); Tout b – average external temperature during heating period in basic year, K (or 0C).

Formula 11 – Heated area and thermal insulation change factor (K3)	
	K3 = [(Fh r – Fh t r – Fh n r)*kh b + (Fh n r + Fh t r)*kh n] / Fh b*kh b,

	Fh b – heated area of premises in basic year, m2; Fh r – heated area of premises in reporting year, m2; Fh n r – heated area of new buildings connected to the heat supply system (as assumed, with new (improved) thermal insulation) in reporting year, m 2; Fh t r – heated area of buildings (existed in basic year) with improved thermal insulation in reporting year, m2; kh b – average heat transfer factor of the buildings in basic year, kWt/m2*K; kh n - heat transfer factor of the heated buildings with new thermal insulation (new or old buildings with new thermal insulation), kWt/m2*K

Formula 12 – Factor of heating period duration change (K4)	
	K4=N hr/N hb
	Nh b – duration of heating period in basic year, hour; Nh r – duration of heating period in reporting year, hour.

Formula 13 – Factor of change of consumers' quantity (K5)	
	K5 =n wr / n wb
	n wr – average quantity of consumers, personal accounts in reporting year; n wb – average quantity of consumers, personal accounts in basic year;

Formula 14 – Factor of change of standard specific discharge of hot water for personal account (K6)	
	K6 = vw r / vw b
	vw r – standard specific discharge of hot water for personal account in reporting year (in heat units, kWt*hour/hour); vw b – standard specific discharge of hot water for personal account in basic year (in heat units, kWt*hour/hour).

Formula 15 – Factor of change of the duration of hot water supply period (K7)	
	K7 = Nwr/ Nwb

	Nw r – duration of the hot water supply period in reporting year, hour. Nw b – duration of the hot water supply period in basic year, hour;

Formula 16 – CO2 emissions due to electric energy consumption from network in basic year, (Econs ib)	
	Econs b = Pb*CEF
	PB – basic consumption of electric energy by the boiler-houses, wherein energy-saving technologies are planned to be implemented, MWt*hour; CEF – Carbon emission factor in the course of electric energy production in Ukraine, t CO2e/MWt.

The monitoring plan presents the quality assurance and control procedures for the monitoring process. Table 1 of Annex 3 of the PDD provides the information about type of equipment, calibration procedure and procedure of actions in case of malfunction.

Data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The roles and responsibilities of the persons involved to monitoring process are described in full in Annex 3 and vividely demonstrated on the Scheme of data collection for Monitoring Report (Figure 3).

On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

3.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential Indirect external leakage of CO2, CH4, N2O generated by fuel production and its transportation and appropriately explains that they are neglected, as they are not under the direct control of the enterprise.

3.9 Estimation of emission reductions or enhancements of net removals (42-47)

The PDD indicates assessment of emissions in the baseline scenario and in the project scenario as the approach chosen to estimate the emission reductions generated by the project.

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are:

Year	Project emissions (tCO2 equivalent)
2005	98240
2006	94538
2007	91849
Total (tCO2 equivalent)	284627

Estimated project emissions for the period from January 01, 2005 to December 31, 2007

Year	Project emissions (tCO2 equivalent)
2008	90862
2009	89890
2010	88013
2011	83201
2012	83201
Total (tCO2 equivalent)	435167

Estimated project emissions for the period from January 01, 2008 year to December 31, 2012

Year	Project emissions (tCO2 equivalent)
2013	83201
2014	83201
2015	83201

2016	83201
2017	83201
2018	83201
2019	83201
2020	83201
2021	83201
2022	83201
2023	83201
2024	83201
Total (tCO2 equivalent)	998412

Estimated project emissions for the period from January 01, 2013 year to December 31, 2024

(b) No leakage is expected during the project activity;

(c) Emissions for the baseline scenario (within the project boundary), which are:

Years	Expected baseline emissions (tCO2 equivalent)
2005	131464
2006	131464
2007	131464
Total (tCO2 equivalent)	394392

Estimated baseline emissions for the period from January 01, 2005 to December 31, 2007

Years	Expected baseline emissions (tCO2 equivalent)
2008	131464
2009	131464
2010	131464
2011	131464
2012	131464
Total (tCO2 equivalent)	657320

Estimated baseline emissions for the period from January 01, 2008 to December 31, 2012

Years	Expected baseline emissions (tCO2 equivalent)
2013	131464
2014	131464
2015	131464
2016	131464

2017	131464
2018	131464
2019	131464
2020	131464
2021	131464
2022	131464
2023	131464
2024	131464
Total (tCO2 equivalent)	1577568

Estimated baseline emissions for the period from January 01, 2013 to December 31, 2024

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are:

Year	Expected project emissions (tCO2 equivalent)	Expected leakage (tCO2 equivalent)	Expected baseline emissions (tCO2 equivalent)	Expected emissions reduction (tCO2 equivalent)
2005	98240		131464	33224
2006	94538		131464	36926
2007	91849		131464	39615
Total (tCO2 equivalent)	284627		394392	109765

Emission reductions estimation before the first commitment period

Year	Expected project emissions (tCO2 equivalent)	Expected leakage (tCO2 equivalent)	Expected baseline emissions (tCO2 equivalent)	Expected emissions reduction (tCO2 equivalent)
2008	90862		131464	40602
2009	89890		131464	41574
2010	88013		131464	43451
2011	83201		131464	48263
2012	83201		131464	48263
Total (tCO2 equivalent)	435167		657320	222153

Emission reductions estimation during the first commitment period

Year	Expected project	Expected leakage	Expected baseline	Expected emissions

	emissions (tCO2 equivalent)	(tCO2 equivalent)	emissions (tCO2 equivalent)	reduction (tCO2 equivalent)
2013	83201		131464	48263
2014	83201		131464	48263
2015	83201		131464	48263
2016	83201		131464	48263
2017	83201		131464	48263
2018	83201		131464	48263
2019	83201		131464	48263
2020	83201		131464	48263
2021	83201		131464	48263
2022	83201		131464	48263
2023	83201		131464	48263
2024	83201		131464	48263
Total (tCO2 equivalent)	998412		1577568	579156

Emission reductions estimation after the first commitment period

The estimates referred to above are given:

(a) On a periodic basis;

(b) From 01/01/2005 to 31/12/2012, covering the whole crediting period;

(c) On a source-by-source basis;

(d) For CO2
(e) In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formula used for calculating the estimates referred above, which is

$$ERU = \sum[Ei, b- Ei, r]$$

where:
E1i, b та E1i, r –CO2 emissions due to fuel consumption for heating and hot water supply to (i) boiler-houses in basic and reporting years correspondingly, t CO2e;
Econs i, b та Econs i, r – CO2 emissions due to electric energy consumption from network by the boiler-house (i) in basic and reporting years correspondingly, t CO2e.

[i] index – boiler-house;
[b] index – relates to base year;

[r] index – relates to reporting year

is consistent throughout the PDD.

Data sources used for calculating the estimates referred to above, such as:

- Guidance "Standardized emission factors for Ukrainian electrical grid"; (version 5, February 02 2007), executed by Global Carbon B.V.;
- Supplier's report/analytical report of chemical laboratory ;
- Report of metrological service;
- Special report of the Municipal Commercial Enterprise "Donetskmiskteplomerezha";
- State Building Standards (B.2.6-31:2006);
- Intergovernmental Panel on Climate Change, IPCC, 2006 Volume 2, Table 2.2, page 2.17

are clearly identified, reliable and transparent.

Emission factors, such as EF (carbon emission factor for Ukrainian electrical grid),
Cef (carbon emission factor for natural gas) were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The estimates referred to above are consistent throughout the PDD.

3.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party, such as

- Environmental Impact Assessment;
- Water Code of Ukraine;
- State Standard 28.74-82 "Hygiene Rules and Quality Control";
- Building Standards and Rules 4630-92;
- Land Code of Ukraine;
- State Standard 17.4.1.02.-83 "Protection of Nature, Soils. Classification of chemical substances for pollution control";
- Law of Ukraine "On wastes».

The enterprise also provides reports by the following official annual statistical forms:

- Data on protection of atmospheric air, which contains information on amounts of
trapped and neutralized atmospheric pollutants, itemized emissions of specific pollutants, number of emission sources, measures on reduction of emissions into the atmosphere, emissions from particular groups of pollution sources;
- Data on water use, which presents information on consumption of water, discharge of waste water, and content of pollutants in it, capacity of treatment facilities, etc.;
- Data on formation, use, neutralization, transportation and placement of industrial
and household waste, which presents the annual balance of waste flow, by waste types and hazard classes.

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party, if the analysis referred to above indicates that the environmental impacts are considered significant by the project participants or the host Party.

3.11 Stakeholder consultation (49)

No stakeholders' comments were received.

3.12 Determination regarding small scale projects (50-57)

The PDD appropriately specifies and justifies the SSC project type and category that fall under:

Type III JI SSC project and thresholds less than or equal to 60 kilotonnes (kt) of carbon dioxide (CO2) equivalent annually of JI SSC projects as defined in "Provisions for joint implementation small-scale projects" developed by the JISC.

It is vividly demonstrated in the project documentation that the proposed project is eligible as a SSC project that meets the relevant JI SSC thresholds(s) during the whole crediting period.

The SSC PDD confirms and shows that the proposed JI SSC project is not a debundled component of a large project by explaining that there is no a JI (SSC) project with a publicly available determination in accordance with paragraph 34 of the JI guidelines:

(a) Which has the same project participants; and

(b) Which applies the same technology/measure and pertains to the same project category; and

(c) Whose determination has been made publicly available in accordance with paragraph 34 of the JI guidelines within the previous 2 years; and

Whose project boundary is within 1 km of the project boundary of the proposed JI SSC project at the closest point.

It is proved in the additional documentation submitted by the project participants, as well as evidenced by the determination team during the site visit that the proposed small-scale project is not a debundled component of a larger project.

4 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the"Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha" located in Donetsk city, 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 validation 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, technological and other barriers to determine that the project activity itself is not the baseline scenario.

By synthetic description of the project, the project is likely to result in reductions of GHG emissions partially. An analysis of the investment and technological 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 "Rehabilitation of the District Heating System in Donetsk City" versions 01, 02, 03 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 Commercial Utility Enterprise "Donetskmiskteplomerezha" that relate directly to the GHG components of the project.

/1/ PDD "Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha" version 01 dated 16/07/2010
/2/ PDD "Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha" version 02 dated 24/09/2010
/3/ PDD "Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha" version 03 dated 18/10/2010
/4/ Determination Report "Rehabilitation of the District Heating System in Donetsk City" project of Commercial Utility Enterprise "Donetskmiskteplomerezha" version 01 dated 20/10/2010
/5/ CO2 emission reductions calculation – excel file
/6/ Letter of Endorsement No 1458/23/7 dated 24/09/2010 issued by National Environmental Investment Agency of Ukraine.

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

/1/ PLC NTF "Standard" Licence AB series № 294445. Environmental Impact Assessment. "Reconstruction of basement gas boiler situated at Artem, 43 St. with modular boiler device and consumers' reconnecting
/2/ Ministry for Environmental Protection of Ukraine. State administration of environmental protection in Donetsk region. Original № 07-1763 from March, 31 2010. State ecological examination conclusion
/3/ Licence. AB series № 294445. Donetsk region state administration. LLC "Science-technology company "Standard""
/4/ Newspaper article. "Donetskmiskteplomerezha" statement on ecological consequences of modular boiler building situated at Artem, 43 St. of

Voroshulovskyi region in Donetsk city

/5/ Newspaper article. "Ecoinformation" section. KKP "Donetskmiskteplomerezha" application about intentions

/6/ Ministry of Regional Development and Construction of Ukraine. State enterprise "Specialized state-expert organization - central service of ukrainian state building examination " Subsidiary in Donetsk region. Positive complex expert conclusion from 17.09.200 № 282/2

/7/ Ministry of Regional Development and Construction of Ukraine. State enterprise "Specialized state-expert organization - central service of Ukrainian state building examination " Subsidiary in Donetsk region. Positive complex expert conclusion from 25.11.2008 № 234/3

/8/ Ministry of Regional Development and Construction of Ukraine. State enterprise "Specialized state-expert organization - central service of Ukrainian state building examination " Subsidiary in Donetsk region. Positive complex expert conclusion from 12.09.2008 № 234/2

/9/ Donetsk City Council. Ecological security management. Reply to the letter from 15.04.2010 № 01/33-242

/10/ PLC NTF "Standard". Licence AB series № 294445 Environmental Impact Assessment. Donetsk city boiler OKVD - reconstruction with boilers and heat networks replacement. KKP "Donetskmiskteplomerezha" Contents

/11/ Newspaper article. Statement on ecological consequences of Donetsk boiler-room OKVD with boiler-rooms and heat system's replacement

/12/ PLC NTF "Standard" Licence AB series № 294445 Environmental Impact Assesment 756. Donetsk city boiler kv. 756 - reconstruction with boilers replacement. KKP "Donetskmiskteplomerezha" Contents

/13/ Statement on ecological consequences of Donetsk boiler-room № 756 reconstruction with boiler-room's replacement

/14/ Ministry for Environmental Protection of Ukraine. State administration of environmental protection in Donetsk region. Letter № 13-4182 from 23.06.2010 concerning permission on extrass

/15/ Ministry for environmental Protection of Ukraine. Permission № 1410136300-9 on pollutant extrass in atmosphere by stationary sources

/16/ Supplement to the permission № 1410136300-9 on pollutant extrass in atmosphere by stationery sources

/17/ Ministry for Environmental Protection of Ukraine. State ecological inspection in Donetsk region. Verification act on nature protection legislation requirements' observance

/18/ Waste conduct

/19/ Ministry for Environmental Protection of Ukraine. State administration of environmental protection in Donetsk region. Conclusion № 05/23-01 concerning question of KKP DGS "Donetskmiskteplomerezha" production's waste handling from 06.05.2010

/20/ The list of solid industrial waste generated by KKP "Donetskmiskteplomerezha" in 2010

/21/ Ministry of Health of Ukraine. State sanitary-epidemiology service. State sanitary-epidemiology examination's conclusion of 09.04.2010 № 176/03.1

/22/ Donetsk city sanitary-epidemiology station. State sanitary-epidemiology

examination's protocol of 09.04.2010 № 172/03.1
/23/ Ministry for Environmental Protection of Ukraine. State administration of environmental protection in Donetsk region. Permission № 13.03 from 17.09.09 on waste settling in 2010
/24/ To Permission № 13.03 from 17.09.09 Waste list and waste quantity permitted to settle in 2010 of KKP Donetsk City Council "Donetskmiskteplomerezha"
/25/ Limits № 13.03 for waste formation and settling in 2010
/26/ National joint stock company "Naftogaz of Ukraine". Subsidiary "Ukrtransgaz". Gas pipelines management "Donbastransgaz". Passport of physical and chemical indexes of natural gas for January 2006
/27/ National joint stock company "Naftogaz of Ukraine". Subsidiary "Ukrtransgaz". Gas pipelines management "Donbastransgaz". Passport of physical and chemical indexes of natural gas for February 2006
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/29/ National joint stock company "Naftogaz of Ukraine". Subsidiary "Ukrtransgaz". Gas pipelines management "Donbastransgaz". Passport of physical and chemical indexes of natural gas for April 2006
/30/ National joint stock company "Naftogaz of Ukraine". Subsidiary "Ukrtransgaz". Gas pipelines management "Donbastransgaz". Passport of physical and chemical indexes of natural gas for May 2006
/31/ National joint stock company "Naftogaz of Ukraine". Subsidiary "Ukrtransgaz". Gas pipelines management "Donbastransgaz". Passport of physical and chemical indexes of natural gas for June 2006
/32/ National joint stock company "Naftogaz of Ukraine". Subsidiary "Ukrtransgaz". Gas pipelines management "Donbastransgaz". Passport of physical and chemical indexes of natural gas for July 2006
/33/ Examination results 03.10.08
/34/ Examination results 03.09.08
/35/ Examination results 22.07.08
/36/ Examination results 26.06.08
/37/ List of boiler rooms with frequency transformers
/38/ State statistical supervision. Atmosphere protection report 2008
/39/ State statistical supervision. Atmosphere protection report 2007
/40/ State statistical supervision. Atmosphere protection report 2009
/41/ KKP "Donetskmiskteplomerezha" Petrovskyi T.R. Boiler 4 district Phone number 313-40-81
/42/ Scheme of boiler-room's pipelines
/43/ Accounting devices
/44/ Boiler TVG-8M № 1 from 02.2009 Correlation chart "Gas-Air"
/45/ Hot-water boiler regime map № 1 type TVG-8M
/46/ Boiler-room № 1 TVG -8M Register № 45432 Rrab - 13 kg/sm2 V.O. 16.08.2011 G.I. 16.08.2015
/47/ Boiler-room № 2 TVG -8M Register № 45433 Rrab - 13 kg/sm2 V.O. 07.06.2011 G.I. 07.06.2015
/48/ Hot-water boiler regime map № 2 type TVG-8M

/49/ Boiler IN.414006
/50/ Boiler IN.414005
/51/ TEC accounting record
/52/ Boiler-room MKR-4 hydraulic regime map
/53/ Supercom-01-1 № 005143
/54/ Meter INV № 434422
/55/ Boiler-room's log-book with 2 boilers MKR-N4
/56/ Supercom-01-1 MKR-4 meter data
/57/ Boiler-room's shift register
/58/ Gas meter INV № 431934
/59/ Gas meter
/60/ Gas volume meter Universal
/61/ Gas volume proof-reader V25
/62/ E/e meter № 199148
/63/ E/e meter №918391
/64/ E/e meter INV № 451712
/65/ E/e meter № 416908
/66/ Knife-switch
/67/ E/e meter № 523286
/68/ E/e meter № 552767
/69/ E/e meter № 602919
/70/ Boiler kv. 14-67 KKP "Donetskmiskteplomerezha" Petrovskyi H.R. Phone number 203-35-45 313-30-29
/71/ Hot-water boiler regime map type TVG-8M № 1
/72/ Boiler №1 TVG-8M Register № 44324 R rab 13kgs/sm2. Ordinary test term
/73/ Correlation chart "Gas-Air" from 11.2009
/74/ Hot-water boiler № 2 regime map type TVG-8M № 1
/75/ Boiler № 2 TVG-8M Register № 44325 R rab 13kgs/sm2. Ordinary test term
/76/ Correlation chart "Gas-Air" from 02.2010
/77/ Hot-water boiler № 3 regime map KVN-6,5
/78/ Correlation chart "Gas-Air" from 12.2010
/79/ Boiler № 3 KVG-7,56 Register № 44324
/80/ Boiler № 414263
/81/ Boiler № 410207
/82/ Boiler № 414545
/83/ Log-book
/84/ Shift register
/85/ TEC accounting record
/86/ AB examination register
/87/ Boiler-room's gas equipment kv. "14-67" operating register
/88/ Collector gas meter
/89/ Meter "Safir-M" № 433217
/90/ Meter "Safir" Model 5430
/91/ Meter "Safir-M" № 433219
/92/ Meter "Safir" Model 5420
/93/ Meter "Safir-M" № 433218
/94/ Meter "Safir" Model 5051

/95/ Boiler-room GRU sheme "kv. 14-67"
/96/ Boiler INV № 431935
/97/ Gas meter
/98/ Meter INV № 430251
/99/ Boiler № 01 002
/100/ KKP "Donetskmiskteplomerezha" Kyibushevskyi T.R. Boiler KV. 756 Phone number 53-02-32
/101/ Boiler № 3
/102/ Block BKE-2
/103/ Steam-boiler № 3 Type APK-2102 Factory № 0094 Register № D. 0505/ks
/104/ Steam-boiler № 4 Type APK-2102 Factory № 0092 Register № D. 0506/ks
/105/ Steam-boiler P-0,5-0,8 GN APK - 2102
/106/ Steam-boiler P-0,5-0,8 № 0084
/107/ Steam-boiler P-0,5-0,8 № 0092
/108/ Boiler № 2 Ecoflam
/109/ Hot-water boiler № 2 Type "PEX-95" Factory № 0662738467001 Register № D. 0504/KSM
/110/ Boiler № 1 Ecoflam
/111/ Hot-water boiler № 2 Type "PEX-95" Factory № 0662740609003 Register № D. 0503/KSM
/112/ Boiler № 5 MINI-DON
/113/ Circulatory pump DAB BPH 120/340/65T
/114/ Block boiler setting № 3
/115/ General control panel
/116/ Principal boiler-room's scheme kv. 756
/117/ Equipment scheme KVO boiler 756
/118/ Boiler-room's log-book with boilers type E-1/9/ PC 3,4
/119/ Boiler-room's 756 fire register
/120/ Boiler kv. 756 TEC accounting record
/121/ Meter ККУ-0442,5/5-2,5
/122/ Meter NIK 2303 ARP 1
/123/ Electricity supply scheme
/124/ Gas meter GMS-G
/125/ Gas meter G-250 № 0664
/126/ Gas volume corrector V 25 № 430205
/127/ Gas volume corrector V 25 № 430206
/128/ KKP "Donetskmiskteplomerezha" boiler OKVD Phone number 311-57-95
/129/ Boiler kv. OKVD pipeline scheme
/130/ Corrector V-25 usage instruction during substance change
/131/ Gas meter GMS-G № 118964
/132/ Gas meter
/133/ Gas volume corrector INV № 430547
/134/ Gas meter
/135/ Heat meter SA-94/2M
/136/ Gas meter on burner
/137/ Hot-water boiler № 1 PEX 40-K40
/138/ Boiler

/139/ Boiler № 1 regime map type REX 40 of OKVD boiler-room in Donetsk city
/140/ General control panel
/141/ Block setting "Mini-DON" BN-120
/142/ Object dispatcher's block RDK-16
/143/ Register meter SR-8
/144/ Aggregate register of boiler-room's gas economy
/145/ OKVD operating register
/146/ OKVD boiler electrician operating register
/147/ Examination register of AB and OKVD boiler signaling
/148/ E/e meter № 318289
/149/ E/e meter № 148276
/150/ E/e meter № 31828
/151/ Electricity supply scheme
/152/ KKP "Donetskmiskteplomerezha" Boiler kv. 565 Phone number 58-01-96
/153/ "Donetskmiskteplomerezha" Kyiv heat district Boiler-room kv. № 287
/154/ Boiler's kv. 287 heat scheme
/155/ Gas meter
/156/ Boiler № 410175
/157/ Hot-water boiler № 1 regime map type TVG-8M installed in boiler-room kv. 287 (2 gas-jets)
/158/ Boiler № 1 regime map type TVG-8M installed in boiler-room kv. 287
/159/ Boiler № 1 Hot-water TVG-8M Register №43997
/160/ Boiler № 2 regime map type TVG-8M installed in boiler-room kv. 287
/161/ Boiler № 2 Hot-water TVG-8M Register № 44964
/162/ Boiler INV № 412813
/163/ Boiler № 3 regime map type TVG-8M installed in boiler-room kv. 287
/164/ Boiler № 3 Hot-water TVG-8M Register № 43999
/165/ Boiler INV. № 414706
/166/ Boiler-room's log-book with 2 boilers type TVG, KVG
/167/ Boiler-room's kv. 287 water expenses accounting register
/168/ Gas expenses kv. 287 boiler-room register
/169/ Boiler-rooms log-book with 2 boilers type TVG, KVG
/170/ Boiler kv. 287 pipeline scheme
/171/ Gas meter G INV №430422
/172/ Meter "Safir" Model 5415 № 10521738 INV № 432718
/173/ Meter "Safir" Model 5051 INV № 10140797
/174/ Meter "Safir" Model 5420 № 10293816 INV № 432719
/175/ Gas volume corrector V25 INV № 430547
/176/ Gas volume meter Universal-01 № 2256 № 433413
/177/ KKP "Donetskmiskteplomerezha" KTR boiler-room of Kyiv district Phone number 258-09-07
/178/ Boiler KMP heat scheme
/179/ Gas volume meter Universal-01 № 5657
/180/ Gas volume meter
/181/ Hot-water boiler INV № 410769
/182/ Hot-water boiler № 1 regime map type TVG-8M installed in Kyiv district boiler-room 2 gas-jets

/183/ Hot-water boiler № 1 TVG-8M Register № 44603 Working pressure13 ATM
/184/ Hot-water boiler INV № 419775
/185/ Hot-water boiler № 2 regime map type TVG-8M boiler-room world
/186/ Hot-water boiler № 2 TVG-8M Register № 44604
/187/ Boiler INV № 414132
/188/ Hot-water boiler № 3 regime map type TVG-8M installed in boiler-room Kyiv world
/189/ Hot-water boiler № 3 TVG-8M Register № 45748
/190/ TEC accounting record
/191/ Kyiv community setter gas scheme
/192/ Gas meter G-650
/193/ Gas volume corrector V25 INV № 04154
/194/ Meter "Safir" Model 5415
/195/ Meter "Safir" Model 5051
/196/ Commercial communal enterprise "Donetskmiskteplomerezha" Kyiv heat district Boiler-room Ionina
/197/ TEC accounting record
/198/ Gas volume meter Universal-01 № 5515
/199/ Gas meter G-650 INV № 430423
/200/ Meter "Safir" Model 5430
/201/ Meter "Safir" Model 5420
/202/ Meter "Safir" Model 5051
/203/ Gas volume corrector V25 INV № 430753
/204/ KKP "Donetskmiskteplomerezha" Budenivskyi heat district Boiler "GB-2"
/205/ Boiler № 1 NIISTU-5 Register № 29 INV № 414476
/206/ Boiler № 2 NIISTU-5 Register № 30 INV № 414533
/207/ Boiler № 3 NIISTU-5 Register № 31 INV № 414558
/208/ Boiler № 4 NIISTU-5 Register № 32 INV № 419821
/209/ Boiler № 5 NIISTU-5 Register № 33 INV № 414609
/210/ TEC GB № 2 accounting register
/211/ Gas meter G RGK-1730
/212/ Gas volume corrector V25 INV № 5147
/213/ E/e meter № 11885
/214/ E/e meter TT 200/5
/215/ KKP "Donetskmiskteplomerezha" boiler kv. UESS INV № 415306
/216/ Boiler № 4 KVANT-1,5 INV № 415248
/217/ Ventilator № 2 VD-2,7
/218/ Boiler № 2 KV-GM-1,1/95
/219/ Boiler № 1 KV-GM-1,1/95 INV № 415246
/220/ Energy resources accounting register
/221/ Gas meter INV № 430163
/222/ Gas volume meter Universal-02 № 555
/223/ Lead-in II registration shield
/224/ Lead-in II. Electrical meter. Reactive. Consumption № 721649
/225/ Lead-in II. Electrical meter. Reactive. Consumption № 330668
/226/ Lead-in II. Electrical meter. Reactive. Consumption № 2546
/227/ Lead-in I. Active electrical meter № 940512

/228/ Boiler-room's building
/229/ Address: Antipova St., 6a, Flat 138
/230/ KKP "Donetskmiskteplomerezha" Kalininskiy heat district. Kot. kv. 138
/231/ E/e meter № 770376
/232/ E/e meter № 5096
/233/ E/e meter № 006121
/234/ E/e meter № 89235
/235/ E/e meter № 059209
/236/ E/e meter № 770901
/237/ "Energomera" meter CE6803V
/238/ Boiler № 138 heat scheme
/239/ Conditional signs
/240/ Boiler-room's kv. 138 principal pipeline scheme
/241/ Boiler-room's № 138 scheme
/242/ Small boiler-room energy resources' accounting register
/243/ Passport of hot-water boiler TVG-8M Register № 44320
/244/ Working project: Object: "Technical reconstruction of boiler-room kv. 138 in Kalininskiy heat district in Donetsk city"
/245/ Gas volume meter Universal-01 № 3012
/246/ Gas volume meter. Universal
/247/ Conditional signs. Kalininskyi heat district
/248/ Passport. "Safir M" pressure detector Factory № 10507742
/249/ Passport. "Safir M" pressure detector Factory № 10290814
/250/ Passport. "Safir M" pressure detector Factory № 10134974
/251/ KKP "Donetskmiskteplomerezha" Boiler kv. DPI/245 INV № 110219
/252/ TEC boiler kv. 245 accounting register
/253/ Boiler TVG-8M № 2 Register № 44587 INV № 30-47 Factory № 1148
/254/ Boiler TVG-8M № 1 Register № 44586 INV № 30-48 Factory № 1142
/255/ Gas volume meter Universal-01 № 6717
/256/ Gas volume corrector V25 № 05142
/257/ Meter "Safir" Model 5051 № 11157191
/258/ Meter "Safir" Model 5430 № 12634426
/259/ Meter "Safir" Model 5420 № 11296252
/260/ Gas meter
/261/ Gas meter
/262/ E/e meter № 199102
/263/ E/e meter № 003533
/264/ E/e meter № 323775
/265/ E/e meter № 416177
/266/ E/e meter № 227477
/267/ E/e meter № 846075
/268/ Energomera meter № 53006360 CE6803V
/269/ Gas meter № 431948 RG-K-690
/270/ Gas volume corrector V25
/271/ E/e meter № 866372
/272/ E/e meter № 327578
/273/ E/e meter № 102188

/274/ E/e meter № 884107
/275/ E/e meter № 770873
/276/ E/e meter № 393928
/277/ KKP DGS "Doneskmiskteplomerezha" of Voroshilovskiy heat region, Boiler kv. 191a
/278/ Hot-water boiler 191a regime map
/279/ Boiler № 1 TVG-8M Register № 45281
/280/ Hot-water regime map
/281/ Boiler INV № 414001
/282/ Boiler INV № 414002
/283/ Boiler № 2 TVG-8M Register № 45280
/284/ Register
/285/ Boiler-room's kv. 191a heat scheme
/286/ Gas meter
/287/ KKP "Donetskmiskteplomerezha" of Voroshulovskyi heat district Boiler-room Artem-45
/288/ Meter Energomera СУ 6803M
/289/ Artem-45 TEC accounting register
/290/ Gas meter A-45
/291/ KKP "Donetskmiskteplomerezha" VTR Network Boiler-room Artem-43
/292/ KKP "Donetskmiskteplomerezha" of Voroshilovskiy heat region, Boiler-room kv. 258
/293/ Heat exchanger
/294/ Recovery hot-water exchanger
/295/ Pump INV №410123
/296/ Pump INV №410124
/297/ Pump INV №410122
/298/ Pump INV №410121
/299/ Pump INV №410120
/300/ E/e meters
/301/ Meter "Energomera" CE6803V
/302/ Meter № 883941
/303/ TEC accounting register
/304/ Gas expenses, Kv. 289 boiler-room
/305/ Gas volume meter Universal. Passport
/306/ Pressure detector "Safir-M". Passport
/307/ KKP "Donetskmiskteplomerezha' VTR Network Artem-43 boiler-room
/308/ Gas volume corrector V25 № 05132
/309/ Rotary gas meter RGK-E. Passport
/310/ Boiler Viessmann
/311/ Gas volume corrector V25 Factory № 06054
/312/ Passport. Gas meter CSM - C40 - 40 Factory № 101164
/313/ CMS gas meter
/314/ Communal commercial enterprise "Donetskmiskteplomerezha" Heat energy sale department
/315/ Contract № 169 on heat energy supply
/316/ Contract № 718 on heat energy supply

/317/ Contract № 310 on heat energy supply
/318/ Contract № 124 on heat energy supply
/319/ AP "Donetskmiskteplomerezha" conference protocol
/320/ Details of objects' activity proposed to facilitate in JI Project implementation № 2 for 2004
/321/ Details of objects' activity proposed to facilitate in JI Project implementation № 2 for 2005
/322/ Details of objects' activity proposed to facilitate in JI Project implementation № 2 for 2006
/323/ Details of objects' activity proposed to facilitate in JI Project implementation № 2 for 2007
/324/ Details of objects' activity proposed to facilitate in JI Project implementation № 2 for 2008
/325/ Details of objects' activity proposed to facilitate in JI Project implementation № 2 for 2009
/326/ TEC accounting register
/327/ Gas expenses, Blocks of buildings 287 boiler-room
/328/ Gas volume meter Universal Passport
/329/ Pressure detector "Safir-M" Passport
/330/ Commercial Utility Enterprise «Donetskmiskteplomerezha» VTR Artem-43 boiler-room
/331/ Gas volume corrector V25 Zav № 05132
/332/ Rotary gas meter RGK-E Passport
/333/ Boiler Viessmann
/334/ Gas volume corrector V25 Zav № 06054
/335/ Contract № 169
/336/ Contract № 718
/337/ Contract № 310
/338/ Contract № 124

Persons interviewed:

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

/1/	Skoryk Valentyna Anatoliyivna - Engineer of production-and-technical department, Commercial Utility Enterprise "Donetskmiskteplomerezha"
/2/	Borovskyy Vadym Vyacheslavovych - Manager of production-and-technical department, Commercial Utility Enterprise "Donetskmiskteplomerezha"
/3/	Lubimov Volodimir Silvestrovich – boiler-house foreman
/4/	Osmolovskiy Sergiy Pavlovich – boiler-house chief foreman
/5/	Dragan Oleksandr Oleksandrovich - boiler-house foreman
/6/	Kobilyanska Olga Ivanivna – boiler-house operator
/7/	Montulenko Volodimir Valentinovich - boiler-house chief
/8/	Gromov Oleksandr Georgiyovich - Громов Олександр Георгійович – control instrumentation mechanic
/9/	Gnatishak Oleksandr Yosipovich - boiler-house foreman
/10/	Sofishchenko Arkadiy Anatoliyovich - boiler-house foreman
/11/	Novikova Alla VAsilivna – boiler-house operator
/12/	Kichukova Irina Fedorivna - boiler-house operator
/13/	Sergienko Svitlana Volodimirivna - boiler-house operator
/14/	Chayka Svitlana Genadiivna - boiler-house operator
/15/	Polyakova Galina Volodimirivna – operator of water-purification station
/16/	Panasovsky Oleksandr Viktorovich - boiler-house foreman
/17/	Naumenko Larisa Viktorivna - boiler-house operator
/18/	Matveyeva Lubov Stepanivna - boiler-house operator
/19/	Sidorkina Irina Vasilivna - boiler-house operator
/20/	Krilov Oleg Yuriyovich – Deputy Head of Petrovsky Heat Supply District
/21/	Nichiporenko Nadiya Mikolaivna - boiler-house operator
/22/	Tkachenko Valentina Ivanivna - boiler-house operator
/23/	Vorobyov Yevgeniy - Engineer-developer of JI projects, VEMA S.A.

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APPENDIX A: COMPANY 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)	CAR 01. The project has no approval of the host Party. After finishing project determination report, the PDD and Determination Report will be presented to National Environmental Investments Agency of Ukraine for receiving the Letter of Approval. The Letter of Approval from the country - investor will be provided after approval of project by Ukraine.	Table 2, Section A.5
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)	OK	N/A

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
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	N/A
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	Both countries have designated their Focal Points. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine:. National Environmental Investment Agency of Ukraine 35, Urytskogo str. 03035 Kiev Ukraine Email: info.neia@gmail.com Mr. Orlenko Serghiy, Head of National Environmental Investment Agency of Ukraine Phone: +380445949111 Fax: +380 44 594 9115 Email: info.neia@gmail.com	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		National guidelines and procedures for the approval of JI projects are available at www.neia.gov.ua Contact data in Switzerland: Département fédéral de l'environnement, des transports, de l'énergie et de la communication Papiermuhlestrasse 172 Berne Phone: (41-31) 322-6862 Fax: (41-31) 323-0349 Email:Jose.Romero@bafu.admin.ch M. José Romero, Chef de la section conventions de Rio National guidelines and procedures for the approving JI projects are available at	
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,	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		2004.	
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	In the Initial Report submitted by Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO2-e	
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 described in the Initial Report mentioned above	
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	Municipal commercial enterprise "Donetskmiskteplomerezha'' has submitted the PDD to Bureau Veritas Certification, which contains information needed for determination.	
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	The PDD was made publicly available trough AIE website from 17/08/2010 till 15/09/2010.	
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	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out			
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 ERUs 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. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	Conclusion is pending until Letters of Approval authorizing the project participants by Parties involved will be issued (ref. CAR 01).	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
A. General Description of the project				OK	

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
A.1 Title of the project					
A.1.1. Is the title of the project presented?		DR	The title of the project is indicated: "Rehabilitation of the District Heating System in Donetsk City" of the Municipal commercial enterprise "Donetskmiskteplomerezha" **CAR 02.** Project documentation, including supporting documents, must be submitted in English. Please, translate supporting documents (Appendixes 1-3) into English **CAR 03.**Provide in a clear and transparent way the description of the project scenario. **CAR 04.** Please provide the history of the SSC project (incl. its JI component)	CAR 02 CAR 03 CAR 04	OK
A.1.2. Is the current version number of the document presented?		DR	The current version of the project is indicated. See section A.1.	OK	OK
A.1.3. Is the date when the document was completed presented?		DR	The date of completeness of the current version of the project design document is 18/10/2010.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?		DR I	The main goal of the project is reducing fuel consumption in district heating system, in particular natural gas and electricity	CL 01	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?		DR	consumption by means of centralized heat supply system rehabilitation in Donetsk city. **CL 01.** Please explain the source of data for the amount of natural gas saved annually after 2005 (p.2). The same concerns information on p.59. Replacement and rehabilitation of boilers and heat distribution network equipment, as well as installation of heat recovery units and frequency controllers will result in decrease of greenhouse gas emissions	OK	OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?		DR	Parties involved in the project are the following: Municipal commercial enterprise "Donetskmiskteplomerezha" (Ukraine) and "VEMA S.A." (Switzerland).	OK	OK
A.3.2. Are project participants authorized by a Party involved?		DR	Municipal commercial enterprise "Donetskmiskteplomerezha" (Ukraine) is authorized in a LoE issued by National Environmental Investment Agency og Ukraine in which the name of the legal entity involved in the JI project is clearly stated **CAR 10.** Please provide a Letter of Endorsement for the project.	CAR10	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
A.3.3. The data of the project participants are presented in tabular format?		DR	Information on the project participants is presented in tabular form (see section A.3. of the PDD).	OK	OK
A.3.4. Is contact information provided in annex 1 of the PDD?		DR	Contact information on the project participants is provided in 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 is indicated as a 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 is indicated as a Host Party.	OK	OK
A.4.1.2. Region/State/Province etc.		DR	Donetsk region	OK	OK
A.4.1.3. City/Town/Community etc.		DR	Donetsk city	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)		DR	Detail of the project physical location is provided in Section A.4.1.4. of the PDD Information is provided according to the template and does not exceed one page.	OK	OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
A.4.2.1. Does the project design engineering reflect current good practices?		DR	The project design engineering imployed in the project, represents current good practices in the municipal heat supply systems and include measures to be implemented in Section A.4.3. 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	As stated in the PDD, the project uses more efficient technology and equipment.	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	The project technology is not likely to be substituted by other or more efficient technologies within the project period. Technologies to be implemented by the project are state-of-the-art technologies in heat supply, have already been tested, will result in much higher efficiency. Taking into consideration general economic circumstances, probability of replacement of technologies proposed in the project by more efficient technologies is too low in the next 20-30 years.	OK	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	Technical staff of the enterprise has necessary knowledge and experience for execution of project activities and repair of common equipment.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?		DR	Provisions for meeting training and maintenance needs are not invisaged by the project	OK	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					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)		DR	CO2 emission reductions will be achieved through the projects activities aimed at raising energy efficiency and, as a result, fuel savings The information is provided according to the requirements and does not exceed one page. **CAR 05.** Please correct the length of the crediting period in Table 6 (estimated amount of CO2e Emission Reductions) **CAR 06.** Judging from the emission reductions calculation the present project is a small-scale one and to be completed in accordance with the JISC requirements for such type of projects. **CAR 07.** To avoid ER calculation mistakes, please, set all values in the whole numbers. **CAR 08.** Figure representing the difference in baseline and project emissions referred to in Section A.4.4.1. is not found in	CAR 05 CAR 06 CAR 07 CAR 08 CAR 09	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			Accompanying document 5 accordingly. **CAR 09.** Please, demonstrate transparently and concisely that the project under consideration is not a debundled component of another JI project "Rehabilitation of the District Heating System in Donetsk Region".		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?		DR	The estimation of emission reductions over the crediting period is provided in Tables 3-5 in section A.4.4.1 of the PDD.	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 in tCO2e is provided in Tables 3-5 in section A.4.4.1 of the PDD.	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	Yes, the data on emission reduction calculation is presented in tabular format (see Tables 3 to 5 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, I	The Project has received the Letter of Endorsement №1458/23/7 dated 24.09.2010 issued by the National Environmental Investment Agency of Ukraine After finishing the Project determination	-	Pending

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			procedure, the PDD and Determination Report will be submitted to the National Environmental Investment Agency of Ukraine for receiving the Host Country Letter of Approval. Refer to CAR01.		
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?		DR	Project participants used a project specific approach to baseline setting and monitoring in accordance with appendix B of the "Criteria for baseline setting and monitoring" to the "JI Guidelines". **CAR 12.** It is incorrect to call the methodological approach applied by the PPs "methodology", as only the approved CDM methodologies may be called so. **CAR 13.** Please, indicate clearly which approach is chosen by the PPs for setting the baseline. **CAR 14.** Please correct "current operation of water supply system" in "Status and correspondence of current supply system" section on p.16 of the PDD. **CAR 15.** Please provide the right name and reference of the document used for calculation of carbon emission factors for baseline (p.16)	CAR12 CAR13 CAR14 CAR15 CAR16 CAR17 CAR18 CAR19 CL02 CL03 CL04 CL05	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			CAR 16. Please correct the numbering of Tables on p.17 **CAR 17.** Data on fuel consumption presented in Table 8 on p.17 is inconsistent with one provided in the Accompanying documents. **CAR 18.** Please provide reference for the Methodology for «Centralized heat supply projects" in Ukrainian terms **CL 02.** Please clarify whether you mean measuring average external temperature during heating season. If yes, please make appropriate corrections to the respective tables for parameters Tout b and Tout r **CL 03.** Please provide "Special report produced by Commercial Utility Enterprise "Donetskmiskteplomerezha" where the data concerning quantity of consumers was taken from. **CL 04.** Judging from the description provided for nwb and nwr , as well as for Fhb and Fhr, Nhb and Nhr parameters, there is no difference between them. Please, clarify this issue. **CL 05.** Please clarify whether parameters khb and khn are taken from the same source. Why khb is taken as an average value and		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			khn – as a unit value? **CAR 19.** Please, make sure all parameters in tables are differentiated between the baseline and project ones throughout the whole PDD text.		
B.1.2. Is it justified the choice of the applicable baseline for the project category?		DR	The elaborated specific approach for this project is similar to the approach developed by the Institute of Engineering Ecology and used in several JI projects on rehabilitation of the district heating systems in cities and regions of Ukraine, which have received final determination.	OK	OK
B.1.3. Is it described how the methodology is applied in the context of the project?		DR	Application of the elaborated JI specific approach is described in a complete and transparent manner.	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	The basic assumptions of the elaborated JI specific approach is described in a complete and transparent manner and presented in Section B.1. of the PDD.	OK	OK
B.1.5. Is all literature and sources clearly referenced?			**CAR 11.** The version of the referenced methodology must be indicated	CAR 11 CL11	OK
		DR	**CL 11.** Please make clear what kind of document "On metrology and metrological activity" is.		
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		Final Concl
B.2.1. Is the proposed project activity additional?		DR	The four-step-wise approach ("Tool for the demonstration and assessment of additionality (version 05.2)") is applied to demonstrate additionality of the project. The requirements of the applied tool are met; the proposed activities are reasonably explained, consequently, the project is considered to be additional. **CL 06.** Step 4 of the additionality proofs and the outcome of this step contradict each other, stating on the one hand, that there is no similar projects and, on the other hand, that there are at least 4 Reconstruction of the heat-supply systems JI projects being implemented in Ukraine including Donetsk Oblast. Please clarify this issue. **CAR 20.** Please explicitly indicate which approach for demonstration of additionality was applied. **CAR 35.** Tool for the demonstration and assessment of additionality requires the costs associated with the project activity to be documented in sub-step 2b. The PDD includes several Excel appendixes which contain information regarding cost of particular energy saving measures, but it	CL06 CAR20 CAR35 CAR36	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			looks reasonable to indicate the summarizing information regarding costs in PDD sub-step 2b and add the reference to the relevant appendixes in order reader could obtain more detailed information when needed. **CAR 36.** The appendixes 1 and 2 contain information regarding pay-back period of the energy saving measures. Taking into account the actual absence of any economical gain this information looks confusing and shall be eliminated.		
B.2.2. Is the baseline scenario described?		DR	The baseline scenario is clearly described in Section B.1. of the PDD	OK	OK
B.2.3. Is the project scenario described?		DR	The project scenario is clearly described and compared to the baseline one with the help of the "Tool for the demonstration and assessment of additionality (version 05.2)".	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 included?		DR	The analysis presented in PDD showed that the emissions in the baseline scenario would likely exceed the emissions in the project scenario due to the implementation of the project measures which will improve the power efficiency of equipment and will decrease the fuel consumption. Fuel savings will result in reduction of the CO_2 emissions.	OK	OK
B.2.5. Is it demonstrated that the project activity itself is		DR	Yes, it is demonstrated that the project		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
not a likely baseline scenario?			activity itself is not a likely baseline scenario in the section B.2 of the PDD.	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?		DR	Establishment of the baseline is carried out with taking into account the mandatory law and regulations (see section B.2 of the PDD).	OK	OK
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	CO2 emission sources which are under the project control are included to the project boundary. They are: - CO2 emissions of boiler-houses belonging to Municipal commercial enterprise "Donetskmiskteplomerezha" in the process of fuel burning for heating and hot water supply; - CO2 emissions related to electric energy production for electrical grid in the amount consumed by the boiler-houses for heat and hot water production, wherein energy-saving measures will be introduced **CAR 21.** Section B.3. must contain information on leakages.	CAR21	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
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	The date of the baseline setting is presented in the required format.	OK	OK
B.4.2. Is the contact information provided?		DR	The contact information is provided correctly	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	**CAR 22.** Please indicate if the entity setting the baseline is also a project participant listed in annex 1.	CAR22	OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?		DR	The project's starting date is 09/05/2004 (see to section C.1. of the PDD). **CAR 23.** Please provide a documented evidence of the starting date of the JI project. (According to the Guidelines for users of the JI SSC PDD form, the starting date of the JI project is the date on which the implementation or construction or real action of the project begins) **CL 07.** Please explain why the date of the first actions in relation to JI project, namely January, 01, 2005 stated in Section C.3. was not regarded as the starting date of the	CAR23 CL07	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			project.		
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?		DR	The project's operational lifetime is clearly defined in years and months(see to section C.2. of the PDD).	OK	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?		DR	Yes, the length of the crediting period is specified in correct order. The starting date of the crediting period was the expected date of first generated ERUs, namely: January 01, 2005. The end date of the crediting period is December 31, 2012. Therefore, length of the crediting period will make 7 years/84 months **CL 08.** Please make clear the starting date of the crediting period (January, 01, 2005 or January, 01 2008), as both of them are indicated in Section C.3.	CL08	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?		DR	The monitoring plan adopted for the project is aimed to insure the availability of all data necessary to define emission levels in the baseline and project scenarios. It goes in line with the Guidance on criteria for baseline setting and monitoring, approved	CAR24 CAR25	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			by JISC. **CAR 24.** Please clearly indicate which approach is chosen for monitoring. **CAR 25.** There are no Sections D.1.1.1. and D.1.1.3. referred to in Section D.1. on page 43 of the PDD.		
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.		DR	Option 1 was chosen by the project participants for monitoring of the emissions.	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	Data to be collected in order to monitor emissions from the project are presented in tabular format in Section D.2. of the PDD These data will be archived both in electronic and paper way. **CL 09.** Please explain what the letter M stands for in tables provided in Section D.1. of the PDD. **CAR 26.** Please, bring in line data in tables provided in Section D.1. with ones from Section B.1. taking into consideration the corrective and clarification requests related to the tables of parameters in Section B.1.	CL09 CAR 26	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	The formulae used to estimate project emissions is presented in Section D.1. of the PDD. E1, r = LHVr* Cef*Br	OK	OK
D.1.5. Relevant data necessary for determining the		DR	Relevant data necessary for determining the		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.			baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary are presented in the Table D.2. of the 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	The formulae used to estimate baseline emissions is presented in Section D.1. of the PDD. E1, b = LHVb*Cef*Bb	OK	OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)		DR	Not applicable. See section D.1.	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	Not applicable. See section D.1.	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	See Section D.1. of the PDD.	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	Leakages are not included.	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	Not applicable as no leakages are included. See Section D.1. of the PDD.	OK	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	See Section D.1. of the PDD.	OK	OK
D.1.13. Is information on the collection and archiving of		DR,	**CAR 27.** Section D.2. shall provide for the	CAR27	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
information on the environmental impacts of the project provided?		I	collection of information on environmental impacts, in accordance with procedures as required by the host Party, where applicable. Please provide information on the collection of information on the environmental impacts of the SSC project. Please provide reference to the relevant host Party regulation(s). If not applicable, please state so.		
D.1.14. Is reference to the relevant host Party regulation(s) provided?		DR, I	Reference to the relevant host Party regulation(s) is provided in Section D.2.	OK	OK
D.1.15. If not applicable, is it stated so?		DR, I	See section D.2. of the PDD.	OK	OK
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	Quality control and quality assurance procedures to be used in the monitoring of the measured data are presented in the table in Section D.3.1.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
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		DR	**CAR 28.** The description of project operational and management structure is incomplete. Please provide more detailed and comprehensive description of the operational and management structure, otherwise provide information on where this data could be found in the PDD.	CAR28	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?		DR	The contact information is provided in the Annex 1 of the PDD.		OK
▪ Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	**CAR 29.** Please indicate if the person/entity establishing the monitoring plan is also a project participant listed in annex 1.	CAR29	OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due the project?		DR	The formulae used to estimate anthropogenic emissions by source of GHGs due the project is presented in Section E.1.	CAR30 CAR31 CL10	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			CAR 30. Please check the numbering of tables and its consistency with the text of the PDD. **CAR 31.** Value relating to electric energy consumption presented in Table 13, as well as values presented for E2 and total from tables 14 and 15 can't be found in the Accompanying document 5. **CL 10.** Please, explain what abbreviation TZP in Accompanying document 5 means.		
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	A description of calculation of GHG project emissions in accordance with the formula specified the project emissions are presented in PDD section E.1.	OK	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?		DR	Conservative assumptions have been used to calculate project GHG emissions	OK	OK
E.2. Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?		DR	Leakages are not included to calculations as they are not under the control of the enterprise.	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	Not applicable.	–	–
E.2.3. Have conservative assumptions been used to calculate leakage?		DR	Not applicable.	–	–

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the small-scale project activity emissions?		DR	It is a small-scale project Annual average of GHG emission reductions do not exceed 45 000 tons CO2 - equivalent, therefore proposed project belongs to the JI small-scale projects type III – projects that result in emission reductions of less than or equal to 60 000 tons of carbon dioxide CO2 -equivalent annually. The category for this project is improvement of energy efficiency.	OK	OK
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	The formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline is described in Section E.4..	OK	OK
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	Description of calculation of GHG baseline emissions is presented Section E.4.	OK	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?		DR	Conservative assumptions have been used to calculate baseline GHG emissions.	OK	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		DR	The difference between E.4. and E.3. represents the emission reductions due to	CAR32	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
project during a given period?			the project during a given period. See Tables 17-19 in Section E.5. of the PDD **CAR 32.** Information provided in table 16 and Accompanying document 4 is inconsistent.		
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	See Tables 17-19 in Section E.5. of the PDD **CL 12.** Please explain how coefficients on average real losses before and after reconstruction of networks were calculated. **CL 13.** What was the way of measuring heat amount in the pipelines?	CL12 CL13	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	Analysis of the environmental impacts of the project is sufficiently described in the section F of the project design document. **CAR 33.** Abbreviation for the Environmental Impact Assessment is EIA. Please make it consistent throughout the	CAR33 CAR34	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
			text of the PDD. **CAR 34.** The name of the project Supplier is inconsistent throughout the PDD Please correct it.		
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?		DR, I	According to Ukrainian legislation, an Environmental Impact Assessment (EIA), as a part of the project design documents, has been done for the proposed project and approved by local authority.	OK	OK
F.1.3. Are the requirements of the National Focal Point being met?		DR, I	Refer to section F.1 of the PDD.	OK	OK
F.1.4. Will the project create any adverse environmental effects?		DR, I	Impact on water resources remains the same as in the baseline scenario The project creates some adverse environmental effects connected with wastes. Detailed information is described in the section F.2 of the PDD.	OK	OK
F.1.5. Are transboundary environmental impacts considered in the analysis?		DR, I	Transboundary environmental impacts are considered in the analyses	OK	OK
F.1.6. Have identified environmental impacts been addressed in the project design?		DR, I	Yes, in support of the positive environmental effect of the project statements on the addressed environmental impacts are provided by the PPs in section F.1, as well as in section F.2 of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Final Concl
***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	The Stakeholders' comments were presented in several publications which are listed in Section 6 References (Category 2 Documents) of the present report. No negative comments were received.	OK	OK
G.1.2. The nature of comments is provided?		DR	N/A	OK	OK
G.1.3. Has due account been taken of any stakeholder comments received?		DR	N/A	OK	OK

Table 3 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	The project is environmentally licensed in accordance with the respective legislation.	OK	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?		DR, I	There are conditions of the environmental permit. It is indicated in the PDD and in the list of documents of the report.	OK	OK
1.3. Is the project in line with relevant legislation and plans in the host country?		DR, I	This project is in line with relevant legislation and plans of the Host country.	OK	OK

Table 4 Resolution of Corrective Action and Clarification Requests

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
CAR 01. The project has no approval of the host Party.	1 Table 1	N/A	CAR 01 is not closed as the Project is not approved by the Host Party.
CAR 02. Project documentation, including supporting documents, must be submitted in English. Please, translate supporting documents (Appendixes 1-3) into English		Remarks corrected. All documents have been submitted in English.	CAR 02 is closed based on the due corrections made to the PDD.
CAR 03. Provide in a clear and transparent way the description of the project scenario.	A.2.	Corrected. The project provides for GHG emission reductions due to: - Replacement of old boilers by new highly efficient boilers; - Transfer of load from the boiler-houses with outdated equipment to the boiler-houses fitted with highly efficient equipment; - Upgrading of networks' operation;	CAR 03 is closed based on the due amendments made to the PDD.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
		- Installation of pre-insulated pipes; - Installation of frequency controllers at smoke exhausters' electric drives of draught equipment and hot water pumps supply system.	
CAR 04. Please provide the history of the SSC project (incl. its JI component)	A.2.	Project history has been provided see section A.2.	CAR 04 is closed based on the information provided.
CL 01. Please explain the source of data for the amount of natural gas saved annually after 2005 (p.2). The same concerns information on p.59.	A.2. F.1.	Information has been provided mistakenly.	Information provided mistakenly has been deleted. CL 01 is closed.
CAR 05. Please correct the length of the crediting period in Table 6 (estimated amount of CO2e Emission Reductions)	A.4.4.1.	Corrected See section A.4.4.1.	CAR 05 is closed based on correction made to the PDD.
CAR 06. Judging from the emission reductions calculation the present project is a small-scale one and to be completed in accordance with the JISC requirements for such type of projects.	A.4.4.1.	Corrected See section A.4.4.1.	PPs used the JI PDD Form for the small-scale project as required by the JISC. CAR 06 is closed.
CAR 07. To avoid ER calculation mistakes,	A.4.4.1.	Corrected See section A.4.4.1.	CAR 07 is closed based on the

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
please, set all values in the whole numbers.			corrections made to the PDD.
CAR 08. Figure representing the difference in baseline and project emissions referred to in Section A.4.4.1. is not found in Accompanying document 5 accordingly.		Corrected.	CAR 08 is closed based on the corrections provided.
CAR 09. Please, demonstrate transparently and concisely that the project under consideration is not a debundled component of another JI project "Rehabilitation of the District Heating System in Donetsk Region".	A.4.5.	The proposed small-scale project is not debundled component of a larger project. In 2004 Municipal commercial enterprise "Donetskmiskteplomerezha" signed the contract that Regional Utility Enterprise "Donetskteplokomunenergo" shall be the representative of Municipal commercial enterprise "Donetskmiskteplomerezha" in respect of implementation of the project "Rehabilitation of the Heating System in Donetsk Region»5. Ownership of GHG emissions from sources that are owned by the Municipal commercial enterprise "Donetskmiskteplomerezha", was transferred. In 2004 management bodies of Municipal commercial	CAR 09 is closed on the comprehensive explanation and documented evidences provided.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
		enterprise "Donetskmiskteplomerezha" made a decision about creation of the JI project (name: Rehabilitation of the Heating System in Donetsk City") with the GHG emission reduction sources not included in the project "Rehabilitation of the Heating System in Donetsk Region"5. All sources of GHG emission reductions, which are declared in the project "Rehabilitation of the Heating System in Donetsk Region" are in the closed access for the developers of project, that is why for determination of sources of GHG emissions, which are not included in the project "Rehabilitation of the Heating System in Donetsk Region", data of Municipal commercial enterprise "Donetskmiskteplomerezha" were used.	
CAR 10. Please provide a Letter of Endorsement for the project.	A.5.	Letter of Endorsement of JI from 24.09.2010 # 1458/23/7	LoE has been provided. CAR 10 is closed.
CAR 11. The version of the referenced	B.1.5.	Corrected See section B.1.	CAR 11 is closed based on the

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
methodology must be indicated			corrections made to the PDD.
CAR 12. It is incorrect to call the methodological approach applied by the PPs "methodology", as only the approved CDM methodologies may be called so.	B.1.1.	Corrected See section B.1.	CAR 12 is closed based on the corrections made to the PDD.
CAR 13. Please, indicate clearly which approach is chosen by the PPs for setting the baseline.	B.1.1.	The proposed Project uses a specific approach for joint implementation projects.	CAR 13 is closed based on the explicit indication of the approach used in the PDD.
CAR 14. Please correct "current operation of water supply system" in "Status and correspondence of current supply system" section on p.16 of the PDD.	B.1.1.	Corrected into: active operation of heat supply system in Donetsk	CAR 14 is closed based on the corrections made to the PDD.
CAR 15. Please provide the right name and reference of the document used for calculation of carbon emission factors for baseline (p.16)	B.1.1.	Corrected See section B.1.	CAR 15 is closed based on the corrections made.
CAR 16. Please correct the numbering of Tables on p.17	B.1.1.	Corrected See section B.1.	The numbering of pages has been corrected. CAR 16 is closed.
CAR 17. Data on fuel consumption presented in Table 8 on p.17 is inconsistent with one	B.1.1.	Corrected See section B.1.	CAR 17 is closed based on the corrections made to the PDD.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
provided in the Accompanying documents.			
CAR 18. Please provide reference for the Methodology for «Centralized heat supply projects" in Ukrainian terms	B.1.1.	Corrected See section B.1.	CAR 18 is closed based on the information provided to the PDD.
CL 02. Please clarify whether you mean measuring average external temperature during heating season. If yes, please make appropriate corrections to the respective tables for parameters Tout b and Tout r	B.1.1.	Corrected See section B.1.	CL 02 is closed as the required correction has not been made.
CL 03. Please provide "Special report produced by Commercial Utility Enterprise "Donetskmiskteplomerezha" where the data concerning quantity of consumers was taken from.	B.1.1	Provided.	The document has been provided. CL 03 is closed
CL 04. Judging from the description provided for nwb and nwr , as well as for Fhb and Fhr, Nhb and Nhr parameters, there is no difference between them. Please, clarify this issue.	B.1.1.	Corrected See section B.1.	CL 04 is closed based on the corrections inserted into the PDD.
CL 05. Please clarify whether parameters khb and khn are taken from the same source. Why khb is taken as an average value and	B.1.1.	Corrected See section B.1.	CL 05 is closed based on the corrections inserted into the PDD.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
khn – as a unit value?			
CAR 19. Please, make sure all parameters in tables are differentiated between the baseline and project ones throughout the whole PDD text.	B.1.1	Corrected See section B.1.	CAR 19 is closed based on the corrections inserted into the PDD.
CL 06. Step 4 of the additionality proofs and the outcome of this step contradict each other, stating on the one hand, that there is no similar projects and, on the other hand, that there are at least 4 Reconstruction of the heat-supply systems JI projects being implemented in Ukraine including Donetsk Oblast. Please clarify this issue.	B.2.1	At present, in addition to this project there are at least 4 Projects of Heat Supply Systems Rehabilitation with application of JI mechanisms in Ukraine: Heat Supply Systems in Chernigiv region, Donetsk region, Autonomous Republic of Crimea and Kharkiv city. Other CDM (JI) project activity is not included into the Analysis of business-as-usual. Business-as-usual for heat supply enterprises in Ukraine without application of JI mechanisms is to implement only necessary repair of the outdated equipment, mainly in emergency cases, but not to renew the system. It is possible to obtain additional funds for actual rehabilitation of centralized heat supply system due to application	CL 06 is closed based on the corrections made to the PDD.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
		of JI constituent.	
CAR 20. Please explicitly indicate which approach for demonstration of additionality was applied.	B.2.1	The additionality of the project activity is demonstrated and estimated using the specific approach for "Tool for the demonstration and assessment of additionality" (Version 05.2).	CAR 20 is closed based on the explicit statement provided.
CAR 21. Section B.3. must contain information on leakages.	B.3.1.	Indirect external leakage of CO2, CH4, N2O generated by fuel production and its transportation is excluded. Leakage is not controlled by the Municipal commercial enterprise "Donetskmiskteplomerezha" (it is impossible to estimate quantity of leakage), therefore they were excluded.	CAR 21 is closed on the explanation provided.
CAR 22. Please indicate if the entity setting the baseline is also a project participant listed in annex 1.	B.4.3.	Corrected See section B.1.	CAR 22 is closed based on the amendments made to the PDD.
CAR 23. Please provide a documented evidence of the starting date of the JI project. (According to the Guidelines for users of the JI SSC PDD form, the starting date of the JI	C.1.1.	Provided.	The documented evidence of the starting date of the JI project has been provided.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
project is the date on which the implementation or construction or real action of the project begins)			CAR 23 is closed.
CL 07. Please explain why the date of the first actions in relation to JI project, namely January, 01, 2005 stated in Section C.3. was not regarded as the starting date of the project.	C.1.1.	09/05/2004 – date of project beginning. 01/01/2005 – date of project's crediting beginning.	CL 07 is closed based on the explanation provided.
CL 08. Please make clear the starting date of the crediting period (January, 01, 2005 or January, 01 2008), as both of them are indicated in Section C.3.	C.3.1.	Credited starting date was January 1, 2005.	CL 08 is closed based on the explanation provided.
CAR 24. Please clearly indicate which approach is chosen for monitoring.	D.1.1.	The proposed Project uses a specific approach for joint implementation projects (specific monitoring plan applied in this project was used in JI project "Rehabilitation of Heat Supply Systems in Kharkiv city"): for any project year the baseline scenario may differ due to influence of external factors, such as weather conditions, change of the lower heating value of the fuel, quantity of consumers, etc.	CAR 24 is closed based on the explanation provided.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
		We will adjust the Baseline and quantity of Emission Reduction Units for all project years subject to all these factors.	
CAR 25. There are no Sections D.1.1.1. and D.1.1.3. referred to in Section D.1. on page 43 of the PDD.	D.1.1.	Corrected See section D.1.	CAR 25 is closed based on the corrections made to the PDD.
CL 09. Please explain what the letter M stands for in tables provided in Section D.1. of the PDD.	D.1.3.	Corrected See section D.2.	CL 09 is closed based on the alterations made to the PDD.
CAR 26. Please, bring in line data in tables provided in Section D.1. with ones from Section B.1. taking into consideration the corrective and clarification requests related to the tables of parameters in Section B.1.	D.1.3.	Corrected See section D.2.	CAR 26 is closed based on the corrections made to the PDD.
CAR 27. Section D.2. shall provide for the collection of information on environmental impacts, in accordance with procedures as required by the host Party, where applicable. Please provide information on the collection of information on the environmental impacts of the SSC project. Please provide reference to the relevant host Party regulation(s). If not	D.1.13	The enterprise also provides reports by the following official annual statistical forms: 2-tp (air) Data on protection of atmospheric air, which contains information on amounts of trapped and neutralized atmospheric	CAR 27 is closed as the required information has been provided

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
applicable, please state so.		pollutants, itemized emissions of specific pollutants, number of emission sources, measures on reduction of emissions into the atmosphere, emissions from particular groups of pollution sources; 2-tp (water resources) Data on water use, which presents information on consumption of water, discharge of waste water, and content of pollutants in it, capacity of treatment facilities, etc.; · 2-tp (waste) Data on formation, use, neutralization, transportation and placement of industrial and household waste, which presents the annual balance of waste flow, by waste types and hazard classes.	
CAR 28. The description of project operational and management structure is incomplete.	D.3.1.	Operational structure will include Supplier's (Municipal commercial enterprise	CAR 28 is closed as the required information has been provided.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
Please provide more detailed and comprehensive description of the operational and management structure, otherwise provide information on where this data could be found in the PDD.		"Donetskmiskteplomerezha") operational departments (repair-and-renewal operations, etc.) and personnel of boiler-house operation. Management structure will include administration departments of the Supplier and project's specialists-developers (VEMA S.A.). Further information is provided in Annex 3.	
CAR 29. Please indicate if the person/entity establishing the monitoring plan is also a project participant listed in annex 1.	D.4.1.	Please indicate if the person/entity establishing the monitoring plan is also a project participant listed in annex 1.	CAR 29 is closed based on the information added to the PDD.
CAR 30. Please check the numbering of tables and its consistency with the text of the PDD.	E.1.1.	Corrected See section E.1.	CAR 30 is closed based on the due corrections made to the PDD.
CAR 31. Value relating to electric energy consumption presented in Table 13, as well as values presented for E2 and total from tables 14 and 15 can't be found in the Accompanying document 5.	E.1.1.	Corrected See section E.1.	CAR 31 is closed based on the corrections made to the PDD.
CL 10. Please, explain what abbreviation	E.1.1.	Corrected See section E.1.	CL 10 is closed based on the

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
TZP in Accompanying document 5 means.			corrections made to the PDD.
CAR 32. Information provided in table 16 and Accompanying document 4 is inconsistent.	E.5.1	Corrected See section E.5.	CAR 32 is closed based on the corrections made to the PDD.
CAR 33. Abbreviation for the Environmental Impact Assessment is EIA. Please make it consistent throughout the text of the PDD.	F.1.1.	Corrected See section F.1.	CAR 33 is closed based on the corrections made to the PDD.
CAR 34. The name of the project Supplier is inconsistent throughout the PDD Please correct it.	F.1.1.	Corrected.	CAR 34 is closed based on the due corrections made to the PDD.
CL 11. Please make clear what kind of document "On metrology and metrological activity" is.	B.1.5.	Information has been provided by the Municipal commercial enterprise "Donetskmiskteplomerezha".	CL11 is closed based on the clarification provided.
CL 12 Please explain how coefficients on average real losses before and after reconstruction of networks were calculated.	E.6.1.	Information has been provided by the Municipal commercial enterprise "Donetskmiskteplomerezha". Ratio is calculated by the assessment methods.	CL 12 is closed based on the explanation provided.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
CL 13. What was the way of measuring heat amount in the pipelines?		Measuring of the heat amount in the pipelines is conducted through heat value and volume of burning gas.	CL 13 is closed based on the explanation provided.
CAR 35. Tool for the demonstration and assessment of additionality requires the costs associated with the project activity to be documented in sub-step 2b. The PDD includes several Excel appendixes which contain information regarding cost of particular energy saving measures, but it looks reasonable to indicate the summarizing information regarding costs in PDD sub-step 2b and add the reference to the relevant appendixes in order reader could obtain more detailed information when needed.	B.2.	Expenses on implementation and realization of the project "Rehabilitation of the District Heating System in Donetsk City" by Municipal commercial enterprise "Donetskmiskteplomerezha" are: • Cost of materials to rehabilitate boilers, 2050954 Euro; • Cost of works related to replacement of heating system, 2086146 Euro; • Consulting, other actions, 465000 Euro; • Other expenses, 232000 Euro. In total 4834100 Euro will be spent under the project.	CAR 35 is closed based on the information provided
CAR 36. The appendixes 1 and 2 contain information regarding pay-back period of the	B.2.	Corrected.	CAR 36 is closed based on the corrections made to the PDD.

1. Draft report clarifications and corrective action requests by determination team	2. Ref. to checklist question in tables 1, 2, 3	3. Summary of project owner response	4. Determination team conclusion
energy saving measures. Taking into account the actual absence of any economical gain this information looks confusing and shall be eliminated.			

Appendix B: Verifiers CV's

Work carried out by:

Oleg Skoblyk, Power Management Specialist

Climate Change Verifier
Bureau Veritas Ukraine HSE Department project manager.
Oleg Skoblyk has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University" with specialty Power Management. He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Oleg Skoblyk has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 9 JI projects.

Svitlana Gariyenchyk, Ecology Specialist
Team Member, Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department, Project Manager.

She has 8 year working experience as a Project Manager, Head of Investment, Environmental Programs and Training Department in the company operating in the sphere of ecological audit, management and certification. She is experienced in European Union programs as an environmental protection expert.
She followed study and training course within TACIS program on training of managers in the sphere of environmental protection. She has completed intensive training course "Lead verifier of JI projects". She is involved in the determination/verification of 9 JI projects.

Denis Pishchalov (specialist in economics)
Team member, Financial Specialist
Bureau Veritas Ukraine, Specialist in economics

Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

The determination report was reviewed by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Climate Change Lead Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department Manager.
Ivan Sokolov 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 Systems (IRCA registered), Quality Management Systems (IRCA registered), Occupational Health and Safety Management Systems, and Food Safety Management Systems. Mr. I.Sokolov has performed over 140 audits since 1999. He is a Lead Tutor of IRCA registered ISO 14000 EMS Lead Auditor Training Course, Lead Tutor of IRCA registered ISO 9000 QMS Lead Auditor Training Course. Ivan Sokolov is also a Tutor of Join Implementation/Clean Development Lead Verifier Training Course and has performed determination/verification of more that 50 JI projects.