DETERMINATION REPORT
CEP CARBON EMISSIONS PARTNERS S.A.

DETERMINATION OF THE

"Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC""

REPORT №UKRAINE-DET/0798/2012

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

DETERMINATION REPORT

Date of first issue: 05/11/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: CEP Carbon Emissions Partners S.A.	Client ref.: Fabian Knodel

Summary:

Bureau Veritas Certification has made the determination of the "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC"" project of CEP CARBON EMISSIONS PARTNERS S.A. located in Vinnitsa city, Vinnitsa region, 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 the Guidance on criteria for baseline setting and monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE-det/0798/2012	Subject Group: JI
Project title: "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC""	
Work carried out by: Oleg Skoblyk – Team Leader, Climate Change Lead Verifier Denys Pishchalov – financial specialist	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer Vyacheslav Yeromin – Technical expert	
Work approved by: Ivan Sokolov - Operational Manager	

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1 INTRODUCTION

CEP CARBON EMISSIONS PARTNERS S.A. has commissioned Bureau Veritas Certification to determine its JI project "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC"" (hereafter called "the project") located in Vinnitsa city, Vinnitsa region, 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 determined 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 Lead Verifier

Denys Pishchalov
Bureau Veritas Certification Team Member, Financial specialist

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer

Vyacheslav Yeromin
Bureau Veritas Certification, Technical expert

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 determination process where the determiner will document how a particular requirement has been determined and the result of the determination.

The completed determination protocol consists of two tables and is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) submitted by CEP CARBON EMISSIONS PARTNERS S.A. 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, Approved CDM methodology and/or Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, CEP CARBON EMISSIONS PARTNERS S.A. revised the PDD version 01 dated 25/10/2012 and resubmitted it on 08/11/2012 as version 02.

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

2.2 Follow-up Interviews

On 09/11/2012 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 «ICE «Tekhnogaz» LLC» and CEP CARBON EMISSIONS PARTNERS S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1. Interview topics

Interviewed organization	Interview topics
«ICE «Tekhnogaz» LLC»	➢ Project History ➢ Project approach ➢ Project boundary ➢ Schedule of implementation ➢ Organizational Structure ➢ Responsibilities and obligations ➢ Training ➢ Quality control procedures and technologies ➢ Modernization / installation of equipment (records) ➢ Control of metering equipment ➢ The system of keeping records of measurements, the database ➢ Technical Documentation ➢ Monitoring Plan and procedures ➢ Permits and licenses ➢ Environmental Impact Assessment ➢ Stakeholders comments
CEP CARBON EMISSIONS PARTNERS S.A.	➢ Baseline methodology ➢ Monitoring Plan ➢ Additionality proofs ➢ The calculations of emission reductions ➢ Project design ➢ Legal issues relating to the project ➢ Environmental Impacts ➢ Approval of the host party

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 Request (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 issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

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

3 PROJECT DESCRIPTION

The main purpose of the project is reduction of greenhouse gas (GHG) emissions as a result of the modernization of the equipment of liquefied carbon dioxide production line at the "ICE "Tekhnogaz" LLC. Modernization of equipment will reduce specific indicator of energy consumption for the unit of production. The project will also result in lower GHG emissions by heat recuperation of waste energy generated by combustion of natural gas in the production process. The project, initiated by "ICE "Tekhnogaz" LLC, will result into reduction of GHG in the atmosphere and contribute the improvement of the ecological situation in the region.

The main sphere of «ICE «Tekhnogaz» LLC» activity is production of industrial gases (liquefied carbon dioxide, of medical and tonnage oxygen, liquid and gaseous nitrogen). The company today is a leading manufacturer and seller of industrial and medical gases in the region. One of the main tasks of the enterprise is an effective and safe manufacturing and implementation of advanced solutions for the economical use of natural gas in manufacturing processes.

The project scenario provides for the modernization of the equipment of liquefied carbon dioxide production line. Modernization of equipment will result in increased efficiency of the entire system and a reduction in specific energy consumption in the production process, which in turn will lead to a reduction of GHG emissions.
In general project activity is aimed at:

- Modernization of existing heat generating equipment;
- The use of modern gas and heat metering devices; heat network control systems; systems of control, management and computerization of heat generating facilities;
- Implementation of new energy-efficient and energy-saving technological equipment involved into the production process;
- Computerization of operations and installation of control and metering instruments (CMIs) with data displaying on a central screen and on the computer of a production line.
- Installation of heat exchange equipment for utilization of steam-gas mixture heat and utilization of heated water in heating and ventilation systems;
- Installation of storage tanks for produced overcooled liquid carbon dioxide.

Due to the fact that the production technology of liquefied carbon dioxide is connected with large amount of excess heat that is released into the atmosphere, the project provides for its partial utilization by heat recuperators.

05/10/2006 – Project design document development when "ICE "Tekhnogaz" LLC started implementation of measures to reduce energy consumption in the production of carbon dioxide.
01/04/2007 – "ICE "Tekhnogaz" LLC started implementation of measures to reduce energy consumption within the framework of the Joint Implementation Project "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at “ICE “Tekhnogaz” LLC”".
31/10/2012 – The State Environmental Investment Agency of Ukraine issued a Letter of Endorsement № 3256/23/7.

The determination protocol contains CARs and CLs relating to the PDD versions 01 and 02.

4 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 29 Corrective Action Requests and 7 Clarification Requests.

The number between brackets at the end of each section corresponds to the DVM paragraph.

4.1 Project approvals by Parties involved (19-20)

The project "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC"" has already obtained support of the government of Ukraine, namely a Letter of Endorsement №3256/23/7 dated 31/10/2012 issued by the State Environmental Investment Agency of Ukraine.

Bureau Veritas Certification received this letter from the Project Participants and has no doubts in its authenticity.

After completion of Determination Report the project documentation will be submitted to the State Environmental Investment Agency of Ukraine for obtaining a Letter of Approval.
As the project has no approval by the Host Party, CAR 13 remains pending and will be closed after report finalizing (see Appendix A).
The identified areas of concern as to project approvals by the Parties, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination Report (refer to CAR 13).

4.2 Authorization of project participants by Parties involved (21)

The participation for each of the legal entities listed as project participants in the PDD is authorized by Parties involved, which are also listed in the PDD, through written Letters of Approval (from the government of Switzerland, as the country-investor, and from the government of Ukraine, as the host party). See CAR 13.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (hereinafter referred to as JI-specific approach) was the selected approach for identifying the baseline (in accordance with paragraph 11 of the Guidance on criteria for baseline setting and monitoring for JI projects, version 03).

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. Scenario in which the company continues its current practice, without the JI project.

b. Scenario in which the project activities are implemented without the Joint Implementation mechanism.

(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:

a. Production of industrial gases is not a separate sector of the national policy of the Ukrainian Government and there is no regulatory laws, stated in a State Program that regulate relations in the technical gases market and provides for the implementation of measures of modernization and energy efficiency technologies.

b. In the existing model of industrial gases production market could not be fully ensured effective competition among industrial gases producers and creation of a unified pricing strategy that would assist increase of investment in the sector of industrial gases production. Existing today market mechanisms or direct administrative measures did not provide the necessary modernization of existing production facilities of companies.

c. A limited number of modernization and rehabilitation projects of were adopted for implementation. Imperfect rate policy leads to an increase in payable accounts of generation companies, leading to their bankruptcy.

d. Existing tariffs are regulated by the state and do not include investment needs of industrial gases production companies. This situation leads to a constant shortage of funds and the inability of timely capital repair of equipment, ensuring equipment operation, investment in modernization and development of the infrastructure.

e. State support is provided in accordance with the volume of funds provided by the law of Ukraine on the State Budget of Ukraine for the relevant year.

f. The project scenario requires attracting significant additional funds. Such investment is characterized by a significant

payback period and high investment risks that is why it is not attractive for investors.

g. Ukraine does not implement JI projects in the sphere of industrial gases production by selling emission reduction units.

The PDD provides a detailed description in a complete and transparent manner, as well as justification, that the baseline was duly set.

The methods of calculation used to determine the estimated and actual baseline emissions, are sufficiently described in Sections E and D of the PDD, respectively.
The identified areas of concern as to baseline setting, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination report (refer to CAR 14 – CAR 18, CL 04,CL 05, CL 06).

4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used, in accordance with the JI specific approach, defined in accordance with paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring for JI projects, version 03. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

The PDD provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above.

The developer of the project proved that anthropogenic emissions under the project are lower than the emissions that would take place in the absence of the project activity.
Additionality proofs are provided.
Two plausible and realistic alternative scenarios were identified in the project:

- Alternative 1.1: Continuation of the current practice without the JI project implementation.
- Alternative 1.2: The project activities without the Joint Implementation mechanism.

and mandatory compliance of the scenarios with the laws and legal acts was demonstrated.

According to the "Tool for the demonstration and assessment of additionality" (Version 06.0.0) investment analysis and common practice analysis were used in the PDD to justify additionality of the project.
Thus, the overall conclusion is that the project activity meets the criteria of additionality, is not a baseline scenario and is additional.

Additionality is demonstrated appropriately, as a result of the analysis, which is used by the approach chosen.

The identified areas of concern as to additionality, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination report (refer to CAR 19 - CAR 21).

4.5 Project boundary (32-33)

The project boundary defined in the PDD, which in accordance with the specific approach is delineated by the physical, geographical site of two carbon dioxide department of «ICE «Tekhnogaz» LLC» and encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as:
- CO_2 emissions due to natural gas combustion in the course of production;

(ii) Reasonably attributable to the project, such as:
- CO_2 emissions due to fossil fuel combustion in the course of generation of electricity consumed in the course of production;
- CO_2 emissions due to natural gas combustion in the course of thermal energy generation.

(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 CO_2 equivalent, whichever is lower.

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

4.6 Crediting period (34)

The PDD states the starting date of the project as the date when «ICE «Tekhnogaz» LLC» started to implement measures on gas distribution system expansion within the framework of the Joint Implementation Project, and the starting date is 01/04/2007 which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 12 years, or 144 months, from January 1, 2008, to December 31, 2020.

The PDD states the length of the crediting period in years and months, which is 12 years, or 144 months, and the date on which first emission

reductions are expected to be generated was taken as the starting date of the crediting period, namely January 1, 2008.

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.

The identified areas of concern as to crediting period, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination Report (refer to CAR 23).

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was 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 reporting forms, the operating structure and management structure of the enterprise, that will be applied when implementing the monitoring plan.

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: total amount of natural gas consumed in historical period «j», amount of production in historical period «j», electricity consumption in historical period «j», amount of production in monitoring period «y», net calorific value of natural gas, carbon emission factor for natural gas combustion, carbon oxidation factor for natural gas combustion, indirect carbon dioxide emission factor for electricity consumption by consumers, total amount of thermal energy generated by the company, electricity consumption in monitoring period.

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, as appropriate: baseline emissions (BE_y), project emissions (PE_y), net calorific value (NCV_{XX}), oxidation factor for fuel combustion ($OXID_{xx}$), CO_2 emission factor for electricity ($EF_{CO2,ELEC,XX}$).

According to the guidelines for users of the JI PDD forms, revision # 04, the described approach to 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 PDD development stage:

$FC^{j}_{b,NG}$	Total amount of natural gas consumed in historical period «j» in the baseline scenario, ths m3
$PC^{j}_{b,CO2}$	Amount of production in historical period «j» in the baseline scenario, t
$EC^{j}_{b,ELEC}$	Electricity consumption in historical period «j» in the baseline scenario, MWh;

(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 PDD development stage: none.

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

$PC^{y}_{p,CO2}$	Amount of production in monitoring period «y» in the project scenario, t
NCV^{y}_{NG}	Net calorific value of natural gas in monitoring period «y», GJ/ths m3
$EF^{y}_{C,NG}$	Carbon emission factor for natural gas combustion in monitoring period «y», tC/TJ
$OXID^{y}_{NG}$	Carbon oxidation factor for natural gas combustion in monitoring period «y», relative unit
$EF^{y}_{CO_2,ELEC}$	Indirect carbon dioxide emission factor for electricity consumption by consumers in monitoring period «y», t CO2e /MWh
$HG^{y}_{p,NG,heat,com}$	Total amount of thermal energy generated by the company in monitoring period «y» in the project scenario, Tcal
$EC^{y}_{p,ELEC}$	Electricity consumption in monitoring period «y», MWh

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as data storage through accounting software.

The most objective and cumulative factor that provides a clear picture of whether the emission reduction took place is the fact of GHG emission

reduction through reduction of specific indicator of energy consumption for the unit of production and heat recuperation of waste energy generated by combustion of natural gas in the production process. It can be determined as the difference between baseline emissions and GHG emissions after the project implementation.

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

Formulae used to estimate project emissions (for each gas, source, etc.; emissions in units of CO_2 equivalent, t CO_2e):

$$PE_p^y = PE_{p,NG}^y + PE_{p,ELEC}^y \quad (1)$$

$PE_{p,NG}^y$ - GHG emissions due to natural gas combustion in the course of production in monitoring period «y» of the project scenario, tCO_2e;

$PE_{p,ELEC}^y$ - GHG emissions due to fossil fuel combustion in the course of generation of electricity consumed in the course of production in monitoring period «y» of the project scenario, tCO_2e;

$$PE_{p,NG}^y = \frac{FC_{p,NG}^y \cdot NCV_{NG}^y \cdot EF_{CO2,NG}^y}{10^3} \quad (2)$$

$FC_{p,NG}^y$ - total amount of natural gas consumed in monitoring period «y» of the project scenario, ths m^3;

NCV_{NG}^y - net calorific value of natural gas in monitoring period «y» of the project scenario, TJ/ths m^3;

$EF_{CO2,NG}^y$ - indirect carbon dioxide emission factor for for stationary combustion of natural gas in monitoring period «y», tCO_2e /TJ;

10^3 – index to convert GJ to TJ (GJ/TJ).

[y]- index corresponding to monitoring period;

[CO_2]- index corresponding to carbon dioxide;

[p] - index corresponding to the project scenario;

[NG]- index corresponding to natural gas.

$$EF_{CO2,NG}^y = EF_{C,NG}^y \cdot OXID_{NG}^y \cdot \frac{44}{12} \quad (3)$$

$EF_{C,NG}^y$ - carbon emission factor for natural gas combustion in monitoring period «y», tC/TJ;

$OXID_{NG}^y$ - carbon oxidation factor for natural gas combustion in monitoring period «y», relative unit;

$\frac{44}{12}$ - stoichiometric ratio of carbon dioxide and carbon molecular masses, $tCO_2/t\ C$.
[y]- index corresponding to monitoring period;
[C]- index corresponding to carbon;
[NG]- index corresponding to natural gas.

$$PE^{y}_{p,ELEC} = EC^{y}_{p,ELEC} \cdot EF^{y}_{CO2,ELEC} \quad (4)$$

$EC^{y}_{p,ELEC}$ - electricity consumption in monitoring period «y» of the project scenario, MW*h;

$EF^{y}_{CO2,ELEC}$ - indirect carbon dioxide emission factor for electricity consumption by consumers in monitoring period «y» of the project scenario, ($tCO_2e/MW*h$);
[y]- index corresponding to monitoring period;
[p] - index corresponding to the project scenario;
[ELEC] – index corresponding to electricity.

Formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

$$BE^{y}_{b} = BE^{y}_{b,NG} + BE^{y}_{b,ELEC} + BE^{y}_{b,NG,heat} \quad (5)$$

$BE^{y}_{b,NG}$ - GHG emissions due to natural gas combustion in the course of production in monitoring period «y» in the baseline scenario, tCO_2e;

$BE^{y}_{b,ELEC}$ - GHG emissions due to fossil fuel combustion in the course of generation of electricity consumed in the course of production in monitoring period «y» in the baseline scenario, tCO_2e;

$BE^{y}_{b,NG,heat}$ - GHG emissions due to natural gas combustion in the course of thermal energy generation in monitoring period «y» in the baseline scenario, tCO_2e.

[y]- index corresponding to monitoring period;

[b] - index corresponding to baseline scenario;

[j] - index corresponding to historical period;

[NG]- index corresponding to natural gas;

[heat] - index corresponding to heat generation;

[ELEC] – index corresponding to electricity.

$$BE^{y}_{b,NG} = \frac{PPER_{NG} \cdot PC^{y}_{p,CO2} \cdot NCV^{y}_{NG} \cdot EF^{y}_{CO2,NG}}{10^3} \quad (6)$$

$PC^{y}_{p,CO2}$ - total amount of natural gas consumed in monitoring period «y» in the baseline scenario, ths m^3;

NCV^{y}_{NG} - net calorific value of natural gas in monitoring period «y», TJ/ths m^3;

$EF^{y}_{CO2,NG}$ - default carbon dioxide emission factor for stationary combustion of natural gas in monitoring period «y», tCO_2/TJ;

$PPER_{NG}$ - pre-project production efficiency factor of consumption of natural gas in historical period «j», (ths m^3/tCO_2e).

10^3 – index to convert GJ to TJ (GJ/TJ).

[y]- index corresponding to monitoring period;

[b] - index corresponding to baseline scenario;

[CO_2] - index corresponding to carbon dioxide;

[NG]- index corresponding to natural gas.

$$PPER_{NG} = \frac{\sum \frac{FC^{j}_{b,NG}}{PC^{j}_{b,CO2}}}{3} \quad (7)$$

$FC^{j}_{b,NG}$ - total amount of natural gas consumed in historical period «j» of the baseline scenario, ths m^3;

$PC^{j}_{b,CO2}$ - production in historical period «j» of the baseline scenario, t

3 – number of years of historical period, 2004-2006.

$$EF^{y}_{CO2,NG} = EF^{y}_{C,NG} \cdot OXID^{y}_{NG} \cdot \frac{44}{12} \quad (8)$$

$EF^{y}_{C,NG}$ - carbon emission factor for natural gas combustion in monitoring period «y», tC/TJ;

$OXID^{y}_{NG}$ - carbon oxidation factor for natural gas combustion in monitoring period «y», relative unit;

$\frac{44}{12}$ - stoichiometric ratio of carbon dioxide and carbon molecular masses, tCO_2/tC

[b] - index corresponding to baseline scenario;

[y] - index corresponding to monitoring period;

[C]- index corresponding to carbon;

[NG]- index corresponding to natural gas.

$$BE^{y}_{b\ ,ELEC} = PPER_{ELEC} \cdot PC^{y}_{p,CO2} \cdot EF^{y}{}_{CO2,ELEC} \quad (9)$$

$PC^{y}_{p,CO2}$ - amount of production in monitoring period «y» of the project scenario, t;

$EF^{y}_{CO2,ELEC}$ - indirect carbon dioxide emission factor for electricity consumption by consumers in monitoring period «y», t CO2e /MW*h;

$PPER_{ELEC}$ - pre-project production efficiency factor of consumption of electricity in historical period «j», (MW*h/ tCO2e).

[p] - index corresponding to the project scenario;

[y] - index corresponding to monitoring period;

[CO_2] - index corresponding to carbon dioxide;

[ELEC] – index corresponding to electricity.

$$PPER_{ELEC} = \frac{\sum \frac{EC^{j}_{b,ELEC}}{PC^{j}_{b,CO2}}}{3} \qquad (10)$$

$EC^{j}_{b,ELEC}$ - electricity consumption in historical period «j» in the baseline scenario, MW*h;

$PC^{j}_{b,CO2}$ - production in historical period «j» in the baseline scenario, t;

3 – number of years of historical period, 2004-2006.

[b] - index corresponding to baseline scenario;

[j] - index corresponding to historical period;

[CO_2] - index corresponding to carbon dioxide;

[ELEC] – index corresponding to electricity.

$$BE^{y}_{b,NG,heat} = 4{,}1868 \cdot HG^{y}_{p,NG,heat,com} \cdot EF^{y}_{CO2,NG} \qquad (11)$$

$HG^{y}_{p,NG,heat,com}$ - total amount of thermal energy generated by the company in monitoring period «y» of the project scenario, Tcal;

4,1868 – conversion factor Tcal in TJ;

$EF^{y}_{CO2,NG}$ - default carbon dioxide emission factor for stationary combustion of natural gas in monitoring period «y», t CO2e /TJ.

[y]- - index corresponding to monitoring period;

[b] - index corresponding to baseline scenario;

[p] - index corresponding to the project scenario;

[CO_2] - index corresponding to carbon dioxide;

[NG]- index corresponding to natural gas;

[heat] - index corresponding to heat generation.

$$EF^{y}_{CO2,NG} = EF^{y}_{C,NG} \cdot OXID^{y}_{NG} \cdot \frac{44}{12} \quad (12)$$

$EF^{y}_{C,NG}$ - carbon emission factor for natural gas combustion in monitoring period «y», tC/TJ;

$OXID^{y}_{NG}$ - carbon oxidation factor for natural gas combustion in monitoring period «y», relative unit;

$\frac{44}{12}$ - stoichiometric ratio of carbon dioxide and carbon molecular masses, tCO_2/tC.;

[y]- - index corresponding to monitoring period;

[NG]- index corresponding to natural gas.

Formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions/emission reductions in units of t CO_2 equivalent):

Quantity of Emission Reduction Units (ER), t CO_2e:

$$ER^{y} = BE^{y}_{b} - PE^{y}_{p} \quad (13)$$

ER^{y} – emission reductions due to the project activity in monitoring period «y» (tCO_2e);

BE^{y}_{b} – total estimated GHG emissions in monitoring period «y» in the baseline scenario (tCO_2e);

PE^{y}_{p} – total estimated GHG emissions in monitoring period «y» in the project scenario (tCO_2e);

[y] – index that corresponds to monitoring period;

[p] – index that corresponds to the project scenario;

[b] – index that corresponds to the baseline scenario.

The monitoring plan presents the quality assurance and control procedures for the monitoring process, which are sufficiently described in tabular form in PDD Sections D.1.1.1., D.1.1.3. and D.2. This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. Collection of all the key parameters necessary for monitoring and calculation of greenhouse gases emissions reduction are constantly carried out according to the practice, established in «ICE «Tekhnogaz» LLC». Monitoring under the project does not require changes in existing data accounting and collection system.

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, expert judgment, proprietary data, 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.

The identified areas of concern as to the monitoring plan, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 24 – CAR 27; CL 07).

4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains which sources of leakage are to be calculated, and which can be neglected.

According to a JI specific approach no leakage is expected.

4.9 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 or enhancement of net removals generated by the project.

The PDD provides the ex ante estimates of:

(a) Emission reductions from the project (within the project boundary), which are 787 097 tonnes of CO_2e in 2008-2012, 1 268 776 tonnes of CO_2e in 2013-2020;

(b) Leakage (within the project boundary) is not expected;

(c) Emissions for the baseline scenario (within the project boundary), which are 3 465 885 tonnes of CO_2e in 2008-2012, 5 612 112 tonnes of CO_2e in 2013-2020;

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 2 678 788 tonnes of CO_2e in 2008-2012, 4 343 336 tonnes of CO_2e in 2013-2020.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 01/01/2008 to 31/12/2020, covering the whole crediting period;

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

(d) For each GHG, i.e. CO_2;

(e) In tonnes of CO_2 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 formulae used for calculating the estimates referred above are given in Section 4.7. All formulae are consistent throughout the PDD.

For calculating the estimates referred to above, key factors, e.g. the Ukrainian environmental legislation and other national legislation, as well as key relevant factors such as availability of funds for implementation of measures envisaged by the project, tariffs that are set by the state, modern technology and the ability to implement know-how in industrial gases production sphere, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as documents and archival data of the enterprise, standards and statistical forms, results of annual meter readings, etc. are clearly identified, reliable and transparent.

Emission factors, such as carbon emission factor for natural gas combustion ($EF^{y}_{C,NG}$), indirect carbon dioxide emission factor for electricity consumption by consumers ($EF^{y}_{CO_2,ELEC}$) 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.

The annual average of estimated emission reductions over the crediting period are calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

Detailed algorithms of calculations and their results are described in Section D, E and Supporting Documents to the PDD.

The identified areas of concern as to the evaluation of emission reductions, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 28)

4.10 Environmental impacts (48)

Sections F.1. and F.2. of the PDD provide information about the attached documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party.

According to the PDD, impact on water resources will be the same as in the baseline scenario. The existing technology of heat generation run at the objects of PJSC "Donbasenergo" foresees discharging of waste water to the sewage grid with obligatory chemical control in accordance to Water Code of Ukraine, State Standard 28.74-82 "Hygienic regulations and quality control", Building Standards and Rules 4630-92 on determining maximum concentration limits for internal water bodies. The project implementation will have positive effect on ambient air:

1) Reduction of GHG emissions through the implementation of measures to improve the production equipment for the production of electricity;
2) Reduction of fuel consumption for electricity production and power generation for own needs of power unit will lead to the air pollutants emissions reduction.

According to the Ukrainian Law "On wastes», (Article 17) «Obligations of business entities' activity in the sphere of wastes disposal»:
- enterprises shall produce the report about formation, collection, transportation, storage, treatment, utilization, destruction and removal of wastes.

- to ensure complete collection, appropriate storage and prevention of wastes deterioration, for utilization of which there is corresponding technology in Ukraine.
During construction works to reduce the negative impact on land it is planed to equip working places and construction sites with containers for household and construction waste with further removal on authorized landfill.

Transboundary impacts of project activities according to their definitions in the text ratified by Ukraine "Convention on transboundary pollution at a great distance" will not take place. Project implementation does not bring any harmful effects on the environment.

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.

The problem issues revealed as to environmental impacts, comments of project participants and the opinion of Bureau Veritas Certification are described in Annex A of the Determination Report (refer to CAR 29).

4.11 Stakeholder consultation (49)

Stakeholders' comments on the project are absent because PDD does not include the negative impact on the environment and the negative social effects that the discussion was not necessary.

4.12 Determination regarding small scale projects (50-57)

Not applicable.

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable.

4.14 Determination regarding programmes of activities (65-73)

Not applicable.

5 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.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed the determination of the project «Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC"" in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides investment analysis and common practice analysis to determine that the project activity itself is not the 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 determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval by the host Country is awarded, it is our opinion that the project as described in the Project Design Document, Version 02 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

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

7 REFERENCES

Category 1 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/	PDD «Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC"", version 01 dated 25/10/2012
/2/	PDD «Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC"", version 02 dated 08/11/2012
/3/	Supporting Document 1. «Calculation of GHG emission reductions under the project "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC""
/4/	Supporting Document 2 "Investment analysis under the project "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC""
/5/	Letter of Endorsement №3256/23/7 dated 31/10/2012 issued by the State Environmental Investment Agency of Ukraine
/6/	Guidelines for users of the JI PDD form. Version 04, JISC
/7/	Tool for the demonstration and assessment of additionality, Version 06.0.0
/8/	The Kyoto Protocol

/9/	Marrakech Accords, JI Methods
/10/	National inventory report on emissions by sources and removals of greenhouse gases in Ukraine for the period of 1990-2010
/11/	Ukraine's Third National Communication on Climate Change under the Kyoto Protocol
/12/	Ukraine's Fourth National Communication on Climate Change under the Kyoto Protocol
/13/	Ukraine's Fifth National Communication on Climate Change under the Kyoto Protocol
/14/	Guidelines on the assessment of investment analysis ver.05
/15/	Law of Ukraine "On energy saving"
/16/	Law of Ukraine "On electric power"
/17/	Law of Ukraine "On heat supply"
/18/	JI Guidelines. Annex to Decision 9/CMP.1.
/19/	JI Guidance for determination and verification, version 01
/20/	Guidance on criteria for baseline setting and monitoring, JISC. Version 03

Category 2 Documents:

Documents provided to CEP CARBON EMISSIONS PARTNERS S.A. that relate directly to the GHG components of the project.

/1/	The act of fixed assets commissioning №766/1 dated 27/06/2008
/2/	The act of fixed assets commissioning №749/1 dated 27/06/2008
/3/	The act of fixed assets commissioning №759/1 dated 27/06/2008
/4/	The act of fixed assets commissioning №758/1 dated 27/06/2008
/5/	The act of fixed assets commissioning №750/1 dated 27/06/2008
/6/	The act of fixed assets commissioning №514/1 dated 14/09/2011
/7/	The act of fixed assets commissioning №305/1 dated 15/03/2010
/8/	The act of fixed assets commissioning №215/1 dated 15/03/2010
/9/	The act of fixed assets commissioning №304/1 dated 15/03/2010
/10/	The act of fixed assets commissioning №214/1 dated 15/03/2010
/11/	The act of fixed assets commissioning №501/1 dated 16/04/2009
/12/	The act of fixed assets commissioning №465/1 dated 16/04/2009
/13/	The act of fixed assets commissioning №461/1 dated 16/04/2009
/14/	The act of fixed assets commissioning №543/1 dated 16/04/2009
/15/	The act of fixed assets commissioning №542/1 dated 16/04/2009
/16/	The act of fixed assets commissioning №482/1 dated 30/11/2007
/17/	The act of fixed assets commissioning №479/1 dated 30/11/2007
/18/	The act of fixed assets commissioning №456/1 dated 30/11/2007
/19/	The act of fixed assets commissioning №471/1 dated 30/11/2007

/20/	The act of fixed assets commissioning №472/1 dated 30/11/2007
/21/	The act of fixed assets commissioning №462/1 dated 30/11/2007
/22/	The act of fixed assets commissioning №463/1 dated 30/11/2007
/23/	The act of fixed assets commissioning №466/1 dated 30/11/2007
/24/	The act of fixed assets commissioning №465/1 dated 30/11/2007
/25/	The act of fixed assets commissioning №467/1 dated 30/11/2007
/26/	The act of fixed assets commissioning №214/1 dated 22/02/2012
/27/	The act of fixed assets commissioning №162/1 dated 22/02/2012
/28/	The act of fixed assets commissioning №158/1 dated 22/02/2012
/29/	The act of fixed assets commissioning №157/1 dated 22/02/2012
/30/	The act of fixed assets commissioning №156/1 dated 22/02/2012
/31/	The act of fixed assets commissioning №751/1 dated 27/06/2008
/32/	The act of fixed assets commissioning №748/1 dated 27/06/2008
/33/	List of measuring devices that are in operation and are under calibration 2012.
/34/	List of measuring devices that are in operation and are under calibration 2011.
/35/	Photos of equipment of production lines of two carbon dioxide departments of "ICE "Tekhnogaz" LLC"

Persons interviewed:

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

	Name	Organization	Title
/1/	Koval A.M.	«ICE «Tekhnogaz» LLC»	Acting Director
/2/	Shmonyak M.P.	«ICE «Tekhnogaz» LLC»	Chief Engineer
/3/	Osadchuk V.A.	«ICE «Tekhnogaz» LLC»	Chief of carbon dioxide department and gas station
/4/	Tihy V.A.	«ICE «Tekhnogaz» LLC»	Head of electro-mechanical site
/5/	Shevchenko I.M.	«ICE «Tekhnogaz» LLC»	Head of measurement laboratory
/6/	Palamarchuk D. O.	LLC “CEP”	CEP CARBON EMISSIONS PARTNERS S.A. Consultant

APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

Check list for determination, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
Guidelines for Users of the JI PDD form Section A General description of the project				
A.1. Title of the project				
A.1	Is the title of the project presented?	The title is presented. The title of the project is "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC""	OK	OK
A.1	Is the sectoral scope to which the project pertains presented?	**CAR 01**. Please, state the sectoral scope in Section A.1.	**CAR 01**	OK
A.1	Is the current version number of the document presented?	The current version of the document: PDD, Version 02 dated 08/11/2012. See Section A.1.	OK	OK
A.1	Is the date when the document was created presented?	The date when the document was created: 08/11/2012.	OK	OK
A.2. Description of the project				
A.2	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the:	The main purpose of the project is reduction of greenhouse gas (GHG) emissions as a result of the modernization of the equipment of liquefied carbon	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	a) Situation existing prior to the starting date of the project b) Baseline scenario and c) Project scenario (expected outcome, including a technical description)?	dioxide production line at the "ICE "Tekhnogaz" LLC. Modernization of equipment will reduce specific indicator of energy consumption for the unit of production. The project will also result in lower GHG emissions by heat recuperation of waste energy generated by combustion of natural gas in the production process.		
A.2	Is the history of the project (incl. its JI component) briefly summarized?	**CAR 02.** Please in Section A.2 provide the date when development of project design documents for the JI project started.	**CAR 02**	OK
A.3. Project participants				
A.3	Are project participants and Party (ies) involved in the project listed?	Parties involved in the project: «ICE «Tekhnogaz» LLC» (Ukraine - the host party), CEP CARBON EMISSIONS PARTNERS S.A. (Switzerland).	OK	OK
A.3	Is the data of the project participants presented in tabular format?	The data on project participants are given in tabular form.	OK	OK
A.3	Is contact information provided in Annex 1 of the PDD?	Contact information of the «ICE «Tekhnogaz» LLC» and CEP CARBON EMISSIONS PARTNERS S.A. is provided in Annex 1 of the PDD. **CAR 03.** Please in Annex 1 provide contact information of the project participants according to	**CAR 03** **CAR 04**	OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		"Guidelines for users of the PDD for JI projects" (version 04). **CAR 04**. Section A.3 of the PDD should contain information on Code in the Unified State Register of Enterprises and Organizations of Ukraine and Type of activity according to NEIAU Order No. 33.		
A.3	Is it indicated, if it is the case, that the Party involved is a host Party?	Ukraine is the Host Party.	OK	OK
A.4 Technical description of the project				
Location of the project				
A.4.1.1	Host Party(ies)	Ukraine is the Host Party.	OK	OK
A.4.1.2	Region/State/Province etc.	Vinnitsy region, Ukraine	OK	OK
A.4.1.3	City/Town/Community etc.	The project is located in the Vinnytsia city, Ukraine.	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).	Information about location is given in Section A.4.1.4 of the PDD. **CAR 05.** Please, provide detailed information about the location of the project.	**CAR 05**	OK
A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project				
A.4.2	Are the technology (ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	PDD Section A.4.2 provides the description of the main stages of the project implementation, the annual project activities schedule, some relevant technical data relating to main equipment to be installed as well as project activities. Project engineering represents the current cutting-edge	**CAR 06** **CAR 07** **CAR 08** **CAR 09** **CL 01** **CL 02**	OK OK OK OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		practice. **CAR 06**. Please provide information on specifications of heat exchangers used for the utilization of waste heat energy. **CAR 07.** Project provides for installation of efficient water purification system. Please justify the positive changes expected from these implementations. **CAR 08.** Please specify manufacturers of carbon dioxide production systems used in the project. **CAR 09.** Please provide explanation to Figure 5. **CL 01.** Please provide a reference to the web-site of the producer of processor unit. **CL 02.** Please verify the links to purification system manufacturers' web-sites. **CL 03.** Please in Section A.4.2 provide information on steps of water purification.	**CL 03**	OK OK 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	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	The project provides for the modernization of the equipment of liquefied carbon dioxide production line. Due to the fact that the production technology of liquefied carbon dioxide is connected with large amount of excess heat that is released into the atmosphere, the project provides for its partial utilization by heat recuperators.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		Modernization of equipment will result in increased efficiency of the entire system and a reduction in specific energy consumption in the production process, which in turn will lead to a reduction of GHG emissions.		
A.4.3	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided in Section A.4.3.1. of the PDD. **CAR 10.** Tables in Section A.4.3.1. shall comply with Guidelines for users of the JI PDD form. **CAR 11.** In Section A.4.3.1. there are incorrect references to Section E and Supporting Documents. Please provide the correct references.	**CAR 10** **CAR 11**	OK OK
A.4.3	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	**CAR 12**. Please, provide estimated average annual greenhouse gas emission reductions in Table 3 of Section A.4.3. in the PDD in tonnes of CO_2 equivalent.	**CAR 12**	OK
A.4.3	Are the data from questions above presented in tabular format?	Information for the credit period and after the credit period is presented in tabular format. See PDD Tables 2, 3 Section A.4.3.1.	OK	OK
A.4.3.1. Estimated amount of emission reductions over the crediting period				
A.4.3.1	Is the length of the crediting period Indicated?	The length of the crediting period is indicated in the PDD Section A.4.3.1. and Section C.	OK	OK
A.4.3.1	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent are provided in accordance with the calculated values in the tables of	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		Section A of PDD and the Supporting Documents.		
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR 13**. The project has no approval of the Host Party and the investing country. To obtain the Letter of Approval the final Determination report must be submitted to the State Environmental Investment Agency of Ukraine that includes this Determination Protocol and the list of sources of Reference Information. A Letter of Approval of Switzerland as the investing country is not obtained at the current stage of the Project either. **CAR 13** will be closed after the Letter of Approval is issued by the are issued by the Host Party and the investing country.	**CAR 13**	Pending decision.
19	Does the PDD identify at least the host Party as a "Party involved"?	The Host Party involved is Ukraine.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Reference to **CAR 13.**	**CAR 13**	Pending
20	Are all the written project approvals by Parties involved unconditional?	Reference to **CAR 13.**	**CAR 13**	Pending
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party	Party involved 1: Ukraine (the host Party), legal entity is «ICE «Tekhnogaz» LLC». Party involved 2: Switzerland, legal entity is CEP	**CAR 13**	Pending

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	CARBON EMISSIONS PARTNERS S.A. The project participants will be authorized in accordance with the relevant project approvals. Pending **CAR 13**		
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The chosen baseline is described in Section B.1 of the PDD. A specific JI approach is used for setting the baseline. **CAR 14.** Please indicate in PDD the full title of AM 0044. **CL 04.** Please provide references to AM0012 methodology in Section B.1.	**CAR 14** **CL 04**	OK OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The choice of the applicable baseline for the project is justified; detailed theoretical description is provided in section B.1 of PDD. **CL 05**. Please provide references to the Guidance on criteria for baseline setting and monitoring in PDD Section B.1.	**CL 05**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	The PDD provides detailed, full and transparent description and justification that the baseline is established by: (a) Identifying plausible future scenarios and choosing the most plausible one. As a result of evaluation of several alternatives the most plausible of them have been identified and will be used as a baseline: - Alternative 1.1: Continuation of existing practice, without the JI project. - Alternative 1.2: The project activities without the use of the Joint Implementation mechanism. (b) Taking into account key factors such as for example Ukrainian environmental legislation and other national legislation, and key relevant factors, such as availability of funds for implementation of measures envisaged by the project, tariffs that are set by the state, modern technology and the ability to implement know-how in industrial gases production sphere. (c) In a transparent manner with regard to the choice of JI approach and assumptions, parameters, data sources and key factors for identifying initial conditions listed in tabular format in Section B.1. (d) Taking into account of uncertainties and using conservative assumptions (e) In such a way that ERUs cannot be earned for	**CL 06**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		decreases in activity levels outside the project or due to force majeure (f) By drawing on the list of standard variables. The baseline is set; the description is given in Section B of the PDD. **CL 06**. Please, provide a clarification why none of approved methodologies do not reflect the complex nature of the project.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	The baseline assumptions of the developed JI specific approach are clearly described in full in Section B.1 of the PDD. **CAR 15.** Please, check the indexes of parameters for setting the baseline. **CAR 16.** Please provide the correct description of NCV_{NG}^{y} parameter in Section D.1 of the PDD. **CAR 17**. Annex 2 must include a summary of key elements. Please add relevant information in Annex 2. **CAR 18.** Index "*coal*" corresponding to the coal-unnessecary because natural gas is used under the project.	**CAR 15** **CAR 16** **CAR 17** **CAR 18**	OK OK OK OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	When setting baseline the following factors are used: carbon emission factor for natural gas combustion ($EF_{C,NG}^{y}$), indirect carbon dioxide emission factor for	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		electricity consumption by consumers ($EF^{y}_{CO_2,ELEC}$). Source of data (to be) used "National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2010"		
CDM methodology approach only				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality (c) Application of the most recent version	The PDD indicates that the project scenario is not a part of the established baseline scenario. It is also stated that the project will lead to emission reductions. Additionality of the project activity is demonstrated in PDD Section B.2 using the "Tools for the demonstration and assessment of additionality" (Version 06.0.0). **CAR 19.** Alternatives that differ from those that were mentioned in Section B.1. of the PDD are stated in Sub-step 1c in Section B.2. of the PDD. **CAR 20.** At the beginning of Section B.2. of the PDD it is stated that the additionality of the project activity is demonstrated and assessed by using the "Tool for the demonstration and assessment of additionality" (Version 5.2). But version 06.0.0. is used for the project. **CAR 21.** Investment analysis indicates that the project	**CAR 19** **CAR 20** **CAR 21**	OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	started in 2008 whereas the starting date of the project is 01/04/2007 (the discount rate should be recalculated as of 2007). Please make relevant corrections in Supporting Document 2 and the PDD.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Detailed analysis described in Sections A.4.3, B.1 and B.2, shows that emissions of the baseline scenario are likely to exceed emissions of the project scenario due to the implementation of project activities.	OK	OK
29 (b)	Are additionality proofs provided?	Yes. Refer to Section B.2. of the PDD.	OK	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	The fact that the project activity itself is not the baseline scenario is clearly demonstrated in Sections A.2, B.1, B.2 of the PDD.	OK	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	All explanations, descriptions and analyses are made in accordance with the newest version of the "Tools for the demonstration and assessment of additionality". (Version 06.0.0)	OK	OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are:		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	(i) Under the control of the project participants, such as: - CO_2 emissions due to natural gas combustion in the course of production (ii) Reasonably attributable to the project, such as: - CO_2 emissions due to fossil fuel combustion in the course of generation of electricity consumed in the course of production; - CO_2 emissions due to natural gas combustion in the course of thermal energy generation. (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 2000 tonnes of CO_2 equivalent, whichever is lower.		
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart if it is possible?	The project boundary is presented in a tabular form and are understandable enough so that there is no need of graphic presentation.	OK	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated. See Section B of PDD.	OK	OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state 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?	According to the Guidelines for users of JI PDD form (version 04) the starting date of the project is the date on which the implementation or construction or real action of the project begins. The project's starting date is identified and specified in Section C. 1 of the PDD. The starting date of the project is 01/04/2007, which is the date when «ICE «Tekhnogaz» LLC» started to implement measures within the framework of the Joint Implementation Project.	OK	OK
34 (a)	Is the starting date after 2000?	The starting date is after 2000.	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	**CAR 22.** The expected operational lifetime of the project in years and months is incorrect.	**CAR 22**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of the crediting period is stated in years and months in Section C.3. **CAR 23.** The date of the crediting period beginning - is the date when the first emission reductions are expected to be generated. Please clearly set the crediting period boundaries and justify them.	**CAR 23**	OK
34 (c)	Is the starting date of the crediting period before or after the date of the first emission reductions or enhancements of net removals generated by the project?	Refer to **CAR 23**.	**CAR 23**	OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	Generation of ERUs relates to the first commitment period of 5 years (January 1, 2008 – December 31, 2012).	OK	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The PDD states that the prolongation of the crediting period beyond 2012 is subject to approval of the host party and estimation of emission reductions of enhancements of net removals is presented separately for those until 2012 and those after 2012 in the relevant sections of PDD. If after the first commitment period under the Kyoto protocol it is prolonged, the crediting period under the project will be prolonged by 8 years/96 months until December 31, 2020.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
Monitoring Plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	The proposed project uses a JI specific approach based on the JI requirements in accordance with paragraph 9 (a) of the JI Guidance on criteria for baseline setting and monitoring, version 03.	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics subject to monitoring? − The period in which they will be monitored? − All critical factors for the control and reporting of project performance?	The monitoring plan specifies all decisive factors for the control and reporting on project performance: quality control (QC) and quality assurance (QA) procedures; operational and management structures that will be applied when implementing the monitoring plan. **CAR 24.** Check the data unit for the parameters of formula.	**CAR 24**	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specifies indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancement of net removals to be monitored. Data to be monitored are presented in section D of the PDD.	OK	OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable	Default values are provided in the table of Section D of the PDD. They originate from recognized sources and are presented in a transparent manner.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	confidence levels? − Are the default values presented in a transparent manner?			
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	The monitoring plan clearly indicates how the values are to be selected and justified.	OK	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	**CAR 25**. Please, number all formulae in Section D of the PDD. **CAR 26**. Please provide all the values of emission reductions in tonnes of CO_2 equivalent in the PDD. **CAR 27.** Data units for carbon emission factor for natural gas combustion are incorrect. Please correct the data units for carbon emission factor for natural gas combustion.	**CAR 25** **CAR 26** **CAR 27**	OK OK OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Refer to section D of the PDD.	OK	OK
36 (b) (iv)	Are International System Units (IS units) used?	IS units are used for certain parameters.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases within the project boundary is presented in table D.1.1.3. of the PDD.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients and variables are consistent between the baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan is established taking into account the "Guidance on criteria for baseline setting and monitoring" version 3.	OK	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (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? (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 yet available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	The monitoring plan clearly distinguishes three types of data and parameters. Refer to Section D.1. of the PDD. (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. (ii) Data and parameters that are monitored throughout the crediting period. (iii) 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 yet available at the stage of determination are absent.	OK	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	In tables of parameters provided in section D.1.1.1. of the PDD the time of monitoring (frequency) and the source of data to be used, as well as recording method	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		are indicated for all the monitored parameters and data.		
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained in the PDD. The description of formulae is provided in Section D.1.4. of the PDD	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Refer to section 36 (f) of this table.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	See **CAR 25.**	**CAR 25**	OK
36 (f) (iv)	Are all variables with units indicated defined?	Yes. Refer to section D of the PDD.	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes, algorithms/procedures comply with state norms and are conservative.	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty in parameters used is low taking into account the algorithms of data monitoring.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the	There is consistency between the elaboration on the baseline scenario and procedure for calculating the	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	baseline emissions in the monitoring plan and in tables.		
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The formulae used in the PDD are sufficiently described.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Monitoring under the project does not require changes in existing accounting and data collection system existing at «ICE «Tekhnogaz» LLC».	OK	OK
36 (f) (vii)	Are references provided as necessary?	The formulae used in the PDD are sufficiently described.	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions are explained in a transparent manner.	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A	OK	OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	Measurement equipment are subject to a regular calibration according to the quality control procedures and the law of Ukraine “On metrology and metrological activity”. Thus, the issue of uncertainty range and confidence interval is irrelevant for such measurements.	OK	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project?	The monitoring plan was set according to national norms and standards.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?			
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Yes	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	Inspection (calibration) of meters is carried out in accordance with manuals of the manufacturer, approved methodologies on inspection/calibration of meters as well as according to the national standards of Ukraine.	OK	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Detailed operational and management structures are given in Section D.3 to the PDD. **CL 07.** Please provide in Section D.4 information concerning who determined the monitoring plan.	**CL 07**	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring under the project does not require changes in existing accounting system and data collection procedure.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
36 (l)	Does the monitoring plan provide, 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 but not including data that are calculated with equations?	Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions.	OK	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Data to be monitored and required for determination will be kept for two years after the last transfer of ERUs under the project.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	Yes, selected elements of approved CDM methodology are used for setting the baseline scenario. The selected elements and combinations with additional elements that were additionally developed by the project participants are in line with requirements of paragraph 36 above.	OK	OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period:	No periods to overlap during the crediting period are expected.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?			
Leakage **JI specific approach only**				

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	According to a JI specific approach no leakage is expected.	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	The PDD states that there isn't any leakage.	OK	OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	In the PDD the approach of assessment of emissions in the baseline scenario and in the project scenario is indicated. **CAR 28.** Please check the numbering of tables in Section E of the PDD and make corresponding corrections.	**CAR 28**	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)?	PDD provides estimates of: (a) Emissions in the project scenario (Section E.1) (b) Leakage (Section E.2) (c) Emissions in the baseline scenario (Section E.4) (d) Emission reductions adjusted by leakage (Section E.6).	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(d) Emission reductions or enhancements of net removals adjusted by leakage?			
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A	N/A	N/A
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tonnes of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?	(a) Estimates in 43 are given on the periodic basis, in tonnes of CO_2 equivalent, on a source-by-source basis, before, during and after the crediting period. (b) The formulae used in PDD are consistent. (c) Key factors influencing baseline emissions and activity level of the project and risks associated with the project are taken into account, as appropriate. (d) Data sources used to calculate the estimates are clearly identified, reliable and transparent. (e) Default values are taken from identified sources. (f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner. (g) Estimates in 43 are consistent throughout the PDD. (h) The annual average of estimated emission reductions are calculated correctly (by dividing the	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(b) Are the formulae used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of	total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve).		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed de facto, does the PDD include an illustrative forecasted emissions or net removals calculation?	Baseline emission level is calculated using the specific approach employing elements of approved ACM0009 methodology. Forecasted emissions calculation is clearly provided in the PDD.	OK	OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	The environmental impacts of the project have been sufficiently described	OK	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to Supporting Documentation of an environmental impact assessment undertaken in accordance with	**CAR 29.** Please, provide the information relating to the transboundary impact of the project activities.	**CAR 29**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	the procedures as required by the host Party?			
Stakeholder consultations				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	Stakeholders comments on the project are absent because PDD does not include the negative impact on the environment and the negative social effects that the discussion was not necessary.	OK	OK
Determination regarding small-scale projects (additional elements for assessment)				
Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)				
Determination regarding programmes of activities (additional/alternative elements for assessment)				

TABLE 2 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICTION REQUESTS

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 01. Please, state the sectoral scope in Section A.1.	A.2	Sector 3: Energy demand Sector 10 - Fugitive emissions from fuels (solid, oil and gas)	The information is provided in Section A.1 PDD. The issue is closed.
CAR 02. Please in Section A.2 provide the date when development of project design documents for the JI project started.	A.2	01/04/2007 – "ICE "Tekhnogaz" LLC started implementation of measures to reduce energy consumption within the framework of the Joint Implementation Project "Implementation of measures on reduction of energy consumption level and greenhouse gas emissions at "ICE "Tekhnogaz" LLC".	The information is provided in Section A.2 PDD. The issue is closed.
CAR 03. Please section A.3 describe according to "Guidelines for users of the PDD for JI projects" (version 04).	A.3	The data of the project participants in Section A.3 presented in tabular format according to "Guidelines for users of the PDD for JI projects" (version 04).	The issue is closed as corresponding changes are made.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 04. Section A.3 of the PDD should contain information on Code in the Unified State Register of Enterprises and Organizations of Ukraine and Type of activity according to NEIAU Order No. 33.	A.3	Code in the Unified State Register of Enterprises and Organizations of Ukraine – 24901185 Name of activities under the Foreign-Economic Activities Code: 24.11.0 Production of industrial gase; 60.24.0 Road freight transport activities; 45.21.1 Construction of buildings; 51.51.0 Wholesale fuel trade ; 51.55.0 Wholesale chemical product trade; 52.48.9 Retail trade of other not classified nonfood products.	The issue is closed as corresponding information is provided.
CAR 05. Please, provide detailed information about the location of the project.	A.4.1.4	JIP is implemented on the production lines of two carbon dioxide departments of "ICE "Tekhnogaz" LLC" in Vinnitsa city.	The issue is closed as corresponding information is provided.
CAR 06. Please provide information on specifications of heat exchangers used for the utilization of waste heat energy.	A.4.2	The necessary information is provided in Section A.2.	The information was provided in Section A.4.2. The issue is closed.
CAR 07. Project provides for installation of efficient water purification system. Please justify the positive changes expected from these implementations.	A.4.2	Implementation of water purification is an integral part of implementing an integrated system that will provide a reduction in energy consumption, and thus will reduce GHG emissions.	The information was provided in Section A.4.2. The issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 08. Please specify manufacturers of carbon dioxide production systems used in the project.	A.4.2	The project provides for installation of equipment of Union Engineering, which is leading company in the development and implementation of production lines for the production of industrial gases (especially carbon dioxide)	The information was provided in Section A.4.2. The issue is closed.
CAR 09. Please provide explanation to Figure 5.	A.4.2	Figure 5. A typical view of Witteman system of gas cleaning.	The information is provided, the issue is closed.
CAR 10. Tables in Section A.4.3.1. shall comply with Guidelines for users of the JI PDD form.	A.4.3	Tables in Section A.4.3.1. are provided according to Guidelines for users of the JI PDD form.	The issue is closed as corresponding changes are made.
CAR 11. In Section A.4.3.1. there are incorrect references to Section E and Supporting Documents. Please provide the correct references.	A.4.3	Incorrect references were corrected in Section A.4.3.1.	Correct references are provided, the issue is closed.
CAR 12. Please, provide estimated average annual greenhouse gas emission reductions in Table 3 of Section A.4.3. in the PDD in tonnes of CO_2 equivalent	A.4.3	Table 3. Annual average of estimated emission reductions after the crediting period (tonnes of CO2 equivalent) is 542 917 tonnes of CO2 equivalent	The issue is closed as corresponding changes are made.
CAR 13. The project has no approval of the Host Party and the investing country.	19	To obtain the Letter of Approval the final Determination report must be submitted to the State Environmental Investment Agency of Ukraine that includes this Determination Protocol and the list of sources of Reference Information.	**CAR 13** will be closed after the Letters of Approval are issued by the Host Party and the country-investor.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		A Letter of Approval of Switzerland as the investing country is not obtained at the current stage of the Project either.	
CAR 14. Please indicate in PDD the full title of AM 0044.	22	«Energy efficiency improvement projects: boiler rehabilitation or replacement in industrial and district heating sectors». Relevant information is provided in Section B of the PDD.	The issue is closed as corresponding changes are made.
CAR 15. Please, check the indexes of parameters for setting the baseline.	24	Indexes of parameters were cheked, corresponding changes were made.	The issue is closed as corresponding changes are made.
CAR 16. Please provide the correct description of NCV_{NG}^{y} parameter in Section D.1 of the PDD.	24	Net calorific value of natural gas in monitoring period «y», GJ/ths m^3	The issue is closed as corresponding changes are made.
CAR 17. Annex 2 must include a summary of key elements. Please add relevant information in Annex 2.	24	Relevent information is provided in Annex 2.	The issue is closed as corresponding information is provided.
CAR 18. Index "*coal*" corresponding to the coal- unnessecary because natural gas is used under the project.	24	"*coal*" index was deleted and NG index was provided.	The issue is closed as corresponding changes are made.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 19. Alternatives that differ from those that were mentioned in Section B.1. of the PDD are stated in Sub-step 1c in Section B.2. of the PDD.	28	The mistake was corrected. Alternatives are the same as ones in in Section B.1. Refer to the PDD.	The issue is closed as relevant corrections were made.
CAR 20. At the beginning of Section B.2. of the PDD it is stated that the additionality of the project activity is demonstrated and assessed by using the "Tool for the demonstration and assessment of additionality" (Version 5.2). But version 06.0.0. is used for the project.	28	Additionality of the project activity is demonstrated by using the "Tool for the demonstration and assessment of additionality" (Version 06.0.0).	The issue is closed as corresponding changes are made.
CAR 21. Investment analysis indicates that the project started in 2008 whereas the starting date of the project is 01/04/2007 (the discount rate should be recalculated as of 2007). Please make relevant corrections in Supporting Document 2 and the PDD.	28	Relevant corrections were made in the PDD and Supporting Document 2.	The issue is closed as corresponding changes are made.
CAR 22. The expected operational lifetime of the project in years and months is incorrect.	34 (c)	Expected operational lifetime of the project in years and months is 12 years or 144 months (from 01/01/2008 to 31/12/2020).	The issue is closed as corresponding changes are made.
CAR 23. The date of the crediting period beginning is a date when the first emission reductions are expected to be generated. Please clearly set the crediting period boundaries and justify them.	34(c)	Number of project measures in 2007 was not significant so the starting date of lifetime of the project is 01/01/2008. Generation of ERUs relates to the first	The boundaries of the crediting period are set in Section C of the PDD. The issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		commitment period for 5 years (01/01/2008 – 31/12/2012). Prolongation of the crediting period beyond 2012 is subject to approval by the host Party. Calculations of emission reductions are provided separately for the period before 2012 and after 2012.	
CAR 24. Check the data unit for the parameters of formula.	36(a)	The data units for the parameters of formula were checked. Relevant corrections were made.	The issue is closed as corresponding changes are made.
CAR 25. Please, number all formulae in Section D of the PDD.	36 (b) (ii)	All the formulae given in Section D of the PDD were numbered.	The issue is closed as corresponding changes are made.
CAR 26. Please provide all the values of emission reductions in tonnes of CO_2 equivalent in the PDD.	36 (b) (ii)	The values for emission reductions were given in tonnes of CO_2 equivalent throughout the PDD.	The issue is closed as corresponding changes are made.
CAR 27. Data units for carbon emission factor for natural gas combustion are incorrect. Please correct the data units for carbon emission factor for natural gas combustion.	36 (b) (ii)	Carbon emission factor for natural gas combustion in monitoring period «y», tC/TJ	The issue is closed as corresponding changes are made.
CAR 28. Please check the numbering of tables in Section E of the PDD and make corresponding corrections.	42	All formulae resented in Section E of the PDD were numbered.	The issue is closed as corresponding changes are made.
CAR 29. Please, provide the information	48 (b)	Transboundary impacts of project	The information is provided, the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
relating to the transboundary impact of the project activities.		activities according to their definitions in the text ratified by Ukraine "Convention on transboundary pollution at a great distance" will not take place. Project implementation does not bring any harmful effects on the environment.	issue is closed.
CL 01. Please provide a reference to the web-site of the producer of processor unit.	A.4.2	References are provided. The explanation is provided in Sections A 4.2 of the latest PDD version.	The issue is closed as necessary explanations are provided.
CL 02. Please verify the links to purification system manufacturers' web-sites.	A.4.2	References are verified. Relevant changes are made.	Relevant changes are made, the issue is closed.
CL 03. Please in Section A.4.2 provide information on steps of water purification.	A.4.2	Cleaning of feed and circulating water under the project involves the following steps: - Cleaning from mechanical impurities that will be achieved by effective filtration system; - Water softening by means of ULTRA LINE* system; - Using the principle of reverse osmosis, which allows to remove 90-95% of salt from the water.	The information is satisfactory, the issue is closed.

* http://www.hidrostandarts.lv/?l=2&mu=114

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CL 04. Please provide references to AM0012 methodology in Section B.1.	22	The Section B.1 of the PDD provides relevant references.	The issue is closed as necessary references are provided.
CL 05. Please provide references to the Guidance on criteria for baseline setting and monitoring in PDD Section B.1.	23	Relevant references were provided. The issue is closed.	References are accepted, the issue is closed.
CL 06. Please, provide a clarification why none of approved methodologies do not reflect the complex nature of the project.	23	The Section B.1 of the PDD provides relevant information.	Explanation is accepted. The issue is closed.
CL 07. Please provide in Section D.4 information concerning who determined the monitoring plan.	36 (j)	Section D.4. of the PDD indicates CEP Carbon Emissions Partners S.A. and «ICE «Tekhnogaz» LLC» established the monitoring plan. Contact information of the project participants is provided in Annex 1.	The issue is closed as corresponding changes are made.