DETERMINATION REPORT VEMA S.A.

DETERMINATION OF THE REDUCTION OF GREENHOUSE GASES EMISSIONS BY GASIFICATION OF ODESA REGION

REPORT NO.UKRAINE-DET/0314/2011

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VEMA S.A.	Fabian Knodel

Summary:

Bureau Veritas Certification has made the determination of the "Reduction of greenhouse gases emissions by gasification of Odesa region" project of VEMA S.A. located in Odesa 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 Requests, Corrective Actions Requests and Forward Actions Requests (CL, CAR and FAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies Guidance on criteria for baseline setting and monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.:	Subject Group:
UKRAINE-det/0314/2011	JI

Project title:

Reduction of greenhouse gases emissions by gasification of Odesa region

Work carried out by:

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10/08/2011	01	82

Bureau Veritas Certification Holding SAS

Table of Contents *Page*

Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO_2	Carbon Dioxide
DFP	Designated Focal Point
DVM	Determination and Verification Manual
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Green House Gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MP	Monitoring Plan
NGO	Non Government Organization
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

1 INTRODUCTION

VEMA S.A. has commissioned Bureau Veritas Certification to determine its JI project “Reduction of greenhouse gases emissions by gasification of Odesa region” (hereafter called “the project”) located in Odesa 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 validated in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions units (ERUs).

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

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project design.

1.3 Determination team

The determination team consists of the following personnel:

Igor Kachan
Team Leader, Bureau Veritas Certification Climate Change Lead Verifier

Victoria Legka
Team Member, Bureau Veritas Certification Climate Change Verifier

Oleksandr Kuzmenko

Team Member, Bureau Veritas Certification Technical Specialist

Denis Pishchalov
Team Member, Bureau Veritas Certification Financial Specialist

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

2 METHODOLOGY

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

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

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

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by VEMA 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, Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be checked by a Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, VEMA S.A. revised the PDD version 1 and resubmitted it as version 2 dated 05/08/2011 which is deemed final.

The determination findings presented in this report relate to the project as described in the PDD versions 1 and 2.

2.2 Follow-up Interviews

On 29/07/2011 Bureau Veritas Certification conducted a visit to the project site (OJSC "Odesagas") and performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of VEMA S.A. and OJSC "Odesagas" were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC "Odesagas"	➢ Project history ➢ Project approach ➢ Project boundary ➢ Implementation schedule ➢ Organizational structure ➢ Responsibilities and authorities ➢ Training of personnel ➢ Quality management procedures and technology ➢ Rehabilitation/Implementation of equipment (records) ➢ Metering equipment control ➢ Metering record keeping system, database ➢ Technical documentation ➢ Monitoring plan and procedures ➢ Permits and licenses ➢ Local stakeholder's response.
Consultant: VEMA S.A.	➢ Baseline methodology ➢ Monitoring plan ➢ Additionality proofs ➢ Calculation of emission reduction.

2.3 Resolution of Clarification, Corrective Actions and Forward Actions Requests

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

If the determination team, in assessing the PDD and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to JI project requirements, it will raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake in the published PDD that is not in accordance with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw;

(b) Clarification request (CL), requesting the project participants to provide additional information for the determination team to assess compliance with the JI project requirement in question;

(c) Forward action request (FAR), informing the project participants of an issue, relating to project implementation but not project design, that needs to be reviewed during the first verification of the project.

The determination team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the determination.

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

3 PROJECT DESCRIPTION

The project which is initiated by the Open Joint Stock Company “Odesagas” (hereinafter OJSC «Odesagas») is aimed at the reduction of greenhouse gas emissions by changing the structure of fuel consumption in industrial, municipal, administrative and private sectors of Odesa region while replacing solid and liquid fuels with natural gas. The project envisages construction and expansion of gas distribution systems (GDS) of Odesa region, which will also improve the energy efficiency of thermal power generation due to the transition of existing thermal power plants to natural gas, and installation of individual heating and hot water supply systems characterized by better efficiency compared to centralized systems.

OJSC "Odesagas" is an organization that brings together gas facilities of 26 districts of Odesa region and the city of Odesa, and ensures transportation and supply of natural gas to industrial and household consumers. One of the main objectives of the "Odesagas" enterprise is uninterrupted and safe gas supply to Odesa region consumers, as well as the implementation of advanced solutions for the economical use of natural gas. The Company uses modern robust technology of well-known national and foreign producers in order to ensure stable and safe operation of the gas supply system. However, the structure of existing tariffs for gas transportation regulated by the state does not take into consideration amortization and investment needs of gas distribution companies. This hinders the flow of sufficient funds for the purposes of repair, modernization and development of gas networks, procurement of appropriate technological equipment and components.

Project implementation will be carried out within three main sectors of Odesa region: industrial, social and administrative. First of all, the gasification project provides for the construction of the main pipeline system for gasification of consumers of industrial and energy sectors. The project further provides for gasification of consumers in household, administrative and commercial sectors and a gradual transition of households to gas fuel. For gasification of new territories, new gas distribution networks will be developed and built. This will expand the national gas distribution network.

In the absence of the project activity existing systems of transportation and preparation of energy carrier as well as heating systems would be used that would result in the use by the consumers of less ecological fuel (fuel oil, coal, diesel oil), which would generate a significant amount of greenhouse gases (GHG) when burned. This scenario is considered to be the baseline scenario of the project.

In general, the project activity is aimed at ensuring the supply of gaseous fuels (gasification) to end users through the construction and reconstruction of gas distribution network, replacement of solid and liquid fuels and electricity with natural gas, increase in heat energy efficiency, and, as a result, reduction of greenhouse gases under the Joint Implementation Mechanism (JI).

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 Requests, Corrective Action Requests and Forward 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 41 Corrective Action Requests, 2 Clarification Requests and 1 Forward Action Request.

The numbers between brackets at the end of each section correspond to the DVM paragraph.

4.1 Project approvals by Parties involved (19-20)

The project has already been supported by the Government of the host Party (Ukraine), namely by the State Environmental Investment Agency of Ukraine, which has issued a Letter of Endorsement for the Project (Letter of Endorsement №1949/23/7 dated 26/07/2011). Bureau Veritas Certification received this letter from the project participants and does not doubt its authenticity.
As for the present moment no written approvals of the project by Parties involved are available. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environmental Investment Agency of Ukraine, for receiving a Letter of Approval. The written approval by another Party involved, Switzerland, will be obtained later on.

As the project has no approvals by the Parties involved, CAR10 and CAR11 remain pending (refer to the Appendix A).

4.2 Authorization of project participants by Parties involved (21)

The official authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written project approvals (refer to 4.1 above).

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 this approach the elements of the approved CDM methodology ACM0009 «Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas», Version 3.2, are used.

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. Continuation of the existing situation without implementation of JI Project (business-as-usual); and
  b. The proposed project activity without JI component;

(b) Taking into account relevant national and 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. Under the existing market model for the supply of fossil fuels, the effective competition among producers and suppliers of fuel could not be achieved, neither did the fuel pricing, which would stimulate providers to improve efficiency and increase investment in energy sector. Neither existing market mechanisms, nor administrative measures provided the necessary modernization of existing energy source transportation systems. The situation becomes particularly critical given the growth of the need for fossil fuel, the lack of which represents a threat to safe operation of local heating and hot water supply systems, electricity generation systems etc.
  b. The structure of existing tariffs for natural gas distribution is regulated by the state; the tariffs do not take into account amortization and investment needs of natural gas suppliers. This situation leads to a constant shortage of funds and inability to timely complete major repairs, provide equipment operation and invest in modernization and development of infrastructure.
  c. The current Ukrainian system of tariff establishment for natural gas does not include an investment component for the development of gas distribution networks. According to the Law of Ukraine "On principles of the natural gas market functioning" OJSC "Odesagas" is not obliged and unmotivated to build new gas distribution systems at its own expense. At the same time, state investment programs in most cases are directed only at the administrative and organizational implementation.

d. The implementation of the project scenario requires substantial additional investment. Such investment has a very big payback period and high investment risks; therefore it is not attractive for investors.

All explanations, descriptions and analyses pertaining to the baseline in the PDD were found adequate and the baseline is identified appropriately. The baseline scenario envisages the continuation of the practice which existed prior to the project implementation, namely operation of the existing systems of transportation and preparation of energy carrier as well as heating systems that would result in the use by the consumers of less ecological fuel types (fuel oil, coal, diesel oil), combustion of which would generate a significant amount of greenhouse gases (GHG) into the atmosphere.

The identified areas of concern as to the baseline setting, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR12, CAR13, CAR14, CAR15, CAR16, CAR17, CL01).

4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" (Additionality Tool) approved by the CDM Executive Board was used, in accordance with the JI specific approach, defined in paragraph 2(c) of the annex I to the "Guidance on criteria for baseline setting and monitoring". All explanations, descriptions and analyses are made in accordance with the selected tool.

The PDD provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above. With a purpose of demonstration and assessment of the project's additionality the Additionality Tool was used which is considered as a good practice for additionality justification.

Additionality proofs are provided. Two realistic and credible alternative scenarios to the project activity were identified and proven to be in compliance with mandatory legislation and regulations taking into account the enforcement in Ukraine. The investment analysis was used for demonstrating and assessing of the proposed project's additionality according to the Additionality Tool. As an analysis method the benchmark analysis was used. Such financial indicator as IRR (internal rate of return) was assessed. The analysis showed that IRR is below the established limit level, which proves the financial unattractiveness of the project. This conclusion was confirmed by the sensitivity analysis as well. Thus, the project is not financially/economically attractive and would not have been

considered as a potential investment option without the JI component. The common practise analysis showed that there are no similar projects in Ukraine.

Thus, the overall conclusion is that the project activity meets additionality criteria, is not the baseline scenario and is additional.

The identified areas of concern as to the additionality, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR18, CAR19, CAR20, CAR21, CAR22, CL02).

4.5 Project boundary (32-33)

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

(i) Under the control of the project participants (such as CO_2 emissions due to methane leakage at technological equipment and at the end consumers, CO_2 emissions due to the natural gas combustion by the individuals, CO_2 emissions due to the natural gas combustion by the legal entities);

(ii) Reasonably attributable to the project (such as CH_4 emissions when transporting gas by gas transportation networks, CO_2 emissions due to the fossil fuel combustion by the individuals in the baseline scenario, CO_2 emissions due to fossil fuel combustion by the legal entities in the baseline scenario); and

(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of 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. AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

The identified areas of concern as to the project boundary, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR23).

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project began, and the starting date is 17/06/2003, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 30 years and 0 months.

The PDD states the length of the crediting period in years and months, which is total 17 years and 0 months: 4 year for the period prior to the 1st commitment period (2004 – 2007), 5 years for the 1st commitment period (2008-2012) and 8 years for the period following the 1st commitment period (2013-2020), and its starting date is 01/01/2004, which is after the date the first emission reductions are generated by 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 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 the crediting period, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR24, CAR25, CAR26, CAR27).

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 statistics reporting forms; quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in 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 to be monitored such as total quantities of the natural gas combusted in the monitoring period by individuals and by the legal entities; length of gas distribution systems constructed within the project; net calorific values of the natural gas and fossil fuel of different types (coal, fuel oil or diesel oil); GHG emission factor for projects reducing the electricity consumption; specific electric

power loss during heat carrier transportation to the end user; carbon emission factor for natural gas combustion; default methane emission factor on the technological gas equipment at end user; average efficiency factors which take into account energy losses during energy carrier preparation, total losses in the heat supply networks, efficiency of thermal generating units in the baseline and project scenarios; reduced GHG emission factor for natural gas transportation to the end user etc.

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC, such as BE (baseline emissions), PE (project emissions), GWP (global warming potential), NCV (net calorific value) and others.

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as Global warming potential; specific loss of electric power in the course of heat carrier transportation to end consumer; average efficiency factor taking into account energy losses in the course of energy carrier preparation in the baseline scenario; average efficiency factor taking into account energy losses in the course of energy carrier preparation in the project scenario; average efficiency factor taking into account efficiency of thermal generating units in the baseline scenario; average efficiency factor taking into account efficiency of thermal generating units in the project scenario; average efficiency factor taking into account total losses in the heat supply networks in the baseline scenario; average efficiency factor taking into account total losses in the heat supply networks in the project scenario; reduced GHG emission factor for natural gas transportation to end user.

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

(iii) Data and parameters that are monitored throughout the crediting period, such as total quantity of natural gas combusted in the monitoring period by individual; quantity of natural gas combusted in the monitoring period by a legal entity; length of gas distribution systems constructed within the project; net calorific value of natural gas; GHG emission factor for the projects reducing electricity consumption; net calorific

value of fossil fuel of different types (coal, fuel oil or diesel oil); carbon emission factor for natural gas combustion; carbon oxidation factor for natural gas combustion; default methane emission factor of technological gas equipment at end user; default methane emission factor for natural gas transportation and distribution.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as direct measurement with appropriately calibrated measuring equipment (natural gas meters); calculations based on officially approved data from the National Inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine; data processing by the electronic accounting systems; reporting using special reporting forms, with different recording frequency such as monthly or annually and electronic or paper recording method. The respective information for each monitoring parameter is sufficiently described in the section D and Annex 3 of the PDD.

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

Project emissions are calculated using the following formula:

$PE_p^y = PE_{p,gas,PP}^y + PE_{p,gas,LE}^y + PE_{p,los}^y + PE_{tp,gf}^y$, where:

$PE_{p,gas,PP}^y$ - GHG emissions from natural gas combustion by “PP” type consumers (individuals) during the period «y», in the project scenario (tCO_2e);

$PE_{p,gas,LE}^y$ - GHG emissions from natural gas combustion by «LE» type consumers (legal entities) during the period «y», in the project scenario (tCO_2e);

$PE_{p,los}^y$ - GHG emissions from leakage of methane on production equipment and end-users for period «y», in the project scenario (tCO_2e);

$PE_{tp,gf}^y$ - GHG emissions from gas fuel combustion by gas-turbine installations when transporting natural gas to end consumers (tCO_2e);

$[y]$ - index corresponding to monitoring period;

$[p]$ - index corresponding to project scenario;

$[PP]$ - index corresponding to individual;

$[LE]$ - index corresponding to legal entity.

$PE^{y}_{p,gas,PP} = \sum_{pp=1}^{PP} V^{y}_{gas,PP} * NCV^{y}_{gas} * EF^{y}_{p,gas}$, where:

$\sum_{pp=1}^{PP} V^{y}_{gas,PP}$ - total quantity of natural gas combusted in period «y» by individuals (ths. m^3);

NCV^{y}_{gas} - net calorific value of natural gas (TJ/ths. m^3);

$EF^{y}_{p,gas}$ - carbon dioxide emission factor on default for permanent combustion of natural gas (tCO_2/TJ).

$EF^{y}_{p,gas} = k^{c}_{p,gas} * k^{o}_{p,gas} * 44/12$, where:

$k^{c}_{p,gas}$ - carbon emission factor in the course of natural gas combustion (tC/TJ);

$k^{o}_{p,gas}$ - carbon oxidation factor when combusting natural gas (relative units);

$44/12$ - stoichiometric correlation of molecular weight of carbon dioxide and carbon, tCO_2/tC.

$PE^{y}_{p,gas,LE} = \sum_{le=1}^{LE} V^{y}_{gas,LE} * NCV^{y}_{gas} * EF^{y}_{p,gas}$, where:

$\sum_{le=1}^{LE} V^{y}_{gas,LE}$ - total quantity of natural gas combusted in period «y» by legal entities in the project scenario (ths. m^3);

NCV^{y}_{gas} - net calorific value of natural gas (TJ/ths. m^3);

$EF^{y}_{p,gas}$ - dioxide emission factor on default for permanent combustion of natural gas (tCO_2/TJ).

$PE^{y}_{p,los} = PE^{y}_{p,los,1} + PE^{y}_{p,los,2}$, where:

$PE^{y}_{p,los,1}$ - GHG emissions from methane leakage on technological equipment in period «y» in the project scenario (tCO_2e);

$PE^{y}_{p,los,2}$ - GHG emissions from methane leakage on equipment of end consumers in period «y» in the project scenario (tCO_2e).

$PE^{y}_{p,los,1} = \sum L^{y}_{p,los,1} * EF^{y}_{CH_4,p,los,1} * GWP_{CH_4}$, where:

$L^{y}_{p,los,1}$ - length of gas distribution systems constructed within the project (ths. km);

$EF^{y}_{CH_4,p,los,1}$ - methane emission factor on default when natural gas transporting and distributing (tCH_4/ths. km);

GWP_{CH4} - global warming potential for methane.

$$PE^{y}_{p,los,2} = (\sum_{le=1}^{LE} V^{y}_{gas,LE} + \sum_{pp=1}^{PP} V^{y}_{gas,PP}) * NCV^{y}_{gas} * EF^{y}_{CH_4,p,los,2} * GWP_{CH_4},$$ where:

$\sum_{pp=1}^{PP} V^{y}_{gas,PP}$ - total quantity of natural gas combusted in period «y» by legal entities, (ths. m^3);

$\sum_{le=1}^{LE} V^{y}_{gas,LE}$ - total quantity of natural gas combusted in period «y» by individuals, (ths. m^3);

NCV^{y}_{gas} - Net calorific value of natural gas, (TJ/ths.m^3);

$EF^{y}_{CH_4,p,los,2}$ - methane emission factor on default on technological equipment of end consumer (tCH_4/TJ);

GWP_{CH4} - global warming potential for methane.

GHG emissions from gas combustion by gas turbine units during transportation of natural gas by gas distribution network are calculated as follows:

$$PE^{y}_{tp,gf} = (\sum_{le=1}^{LE} V^{y}_{gas,LE} + \sum_{pp=1}^{PP} V^{y}_{gas,PP}) * CEF^{y}_{gas,unit}$$ where:

$\sum_{pp=1}^{PP} V^{y}_{gas,PP}$ - total quantity of natural gas combusted during the period «y» by a legal entity in the project scenario (ths. m^3);

$\sum_{le=1}^{LE} V^{y}_{gas,LE}$ - total volume of natural gas combusted in period “y” by an individual in the project scenario (ths. m^3);

$CEF^{y}_{gas,unit}$ - reduced GHG emission factor for transportation of natural gas to end consumer (tCO_2/m^3).

Baseline emissions are calculated as follows:

$$BE^{y}_{b} = BE^{y}_{b,fuel,PP} + BE^{y}_{b,fuel,LE},$$ where:

$BE^{y}_{b,fuel,PP}$ - GHG emissions from fossil fuel of "fuel" type combustion by consumers of "PP" type during the period «y» in the baseline scenario (tCO_2e);

$BE^{y}_{b,fuel,LE}$ - GHG emissions from fossil fuel of "fuel" type combustion by consumers of «LE» type during the period «y» in the baseline scenario (tCO_2e);

$[y]$ - index corresponding to monitoring period;

$[b]$ - index corresponding to baseline scenario;

$[fuel]$ - index corresponding to type of fossil fuel (coal, fuel oil or diesel oil);

$[PP]$ - index corresponding to an individual;

$[LE]$ - index corresponding to a legal entity.

$$BE^{y}_{b,fuel,PP} = \sum_{pp=1}^{PP} V^{y}_{fuel,PP} * NCV^{y}_{fuel} * k_{h,fuel} * (EF^{y}_{b,fuel} + k_{7,fuel} CEF^{y}_{elec}),$$ where:

$\sum_{pp=1}^{PP} V^{y}_{fuel,PP}$ - total quantity of fossil fuel of "fuel" type combusted in period «y» by individual in the absence of the project (t);

NCV^{y}_{fuel} - net calorific value of fossil fuel of "fuel" type, (TJ/t);

$EF^{y}_{b,fuel}$ - carbon dioxide emission factor on default for permanent combustion of fossil fuel of "fuel" type, in the baseline scenario (tCO_2/TJ);

$k_{h,fuel}$ - adjusting factor (detailed algorithm of the calculation is presented in the section D.1.1.4 of the PDD, formula D.13);

$k_{7,fuel}$ - specific loss of electric energy during heat carrier transportation to end consumer (MWh/GJ);

CEF^{y}_{elec} - GHG emission factor for projects reducing electricity consumption (tCO_2/MWh).

$V^{y}_{fuel,PP} = V^{y}_{gas,PP} * \frac{NCV^{y}_{gas,}}{NCV^{y}_{fuel}}$, where:

$V^{y}_{gas,PP}$ - total quantity of natural gas combusted in period «y» by an individual (ths. m^3);

$NCV^{y}_{gas,}$ - net calorific value of natural gas (TJ/t);

NCV^{y}_{fuel} - net calorific value of fossil fuel of “fuel” type, (TJ/t);

$[gas]$ - index corresponding to natural gas.

$EF^{y}_{b,fuel} = k^{c}_{fuel} * k^{o}_{fuel} * 44/12$, where:

k^{c}_{fuel} - carbon emission factor in the course of combustion of fossil fuel of «fuel» type (tC/TJ);

k^{o}_{fuel} - carbon oxidation factor when combusting fossil fuel of “fuel” type (relative units);

$44/12$ - stoichiometric correlation of molecular weight of carbon dioxide and carbon, tCO_2/tC.

$BE^{y}_{b,fuel,LE} = \sum_{le=1}^{LE} V^{y}_{fuel,LE} * NCV^{y}_{fuel} * k_{m,fuel}$, where:

$\sum_{le=1}^{LE} V^{y}_{fuel,LE}$ - total quantity of fossil fuel of «fuel» type combusted during «y» period by legal entity (t);

NCV^{y}_{fuel} - net calorific value of fossil fuel of “fuel” type in the baseline scenario (TJ/t);

$EF^{y}_{b,fuel}$ - carbon dioxide emission factor on default for permanent combustion of fossil fuel of “fuel” type, in the baseline scenario (tCO_2/TJ);

$k_{m,fuel}$ - adjusting factor (detailed algorithm of calculation of the factor is given in the section D.1.1.4 of the PDD ПТД, formula D.16).

$V^{y}_{fuel,LE} = V^{y}_{gas,LE} * \frac{NCV^{y}_{gas}}{NCV^{y}_{fuel}}$, where:

$V^{y}_{gas,LE}$ - Total quantity of natural gas combusted in period «y» by individual, in the project scenario (ths. m^3);

NCV^{y}_{gas} - Net calorific value of natural gas (TJ/t);

NCV^{y}_{fuel} - Net calorific value of fossil fuel of "fuel" type (TJ/t).

Emission reductions are calculated with the following formula:

$ER^{y} = BE^{y}_{b} - PE^{y}_{p}$, where:

BE^{y}_{b} - GHG emissions due to use of outdated system of energy carrier supply in period «y» in the baseline scenario ($tCO2_e$);

PE^{y}_{p} - GHG emissions due to use of new system of energy carrier supply, in period «y» in the project scenario ($tCO2_e$);

$[y]$ - index corresponding to monitoring period;

$[b]$ - index corresponding to baseline scenario;

$[p]$ - index corresponding to project scenario.

The monitoring plan presents the quality assurance and control procedures for the monitoring process which are described in the section D.2 and Annex 3 of the PDD. This includes information on calibration and on how records on data and 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. The project monitoring is to be conducted according to standard operational practices established at the enterprise within the existing system of the data collection, accounting and reporting. The structure of collecting and processing of gas supply data is presented in the fig.13 in the section D.3 of the PDD. Information on gas consumption is submitted by the legal entities to the Gas accounting department of OJSC "Odesagas" every month. Also, the department for control of gas consumption by consumers for Odesa MPU conducts monthly inspections of meters, issues the statement, signed by the enterprise, and forwards it to the Gas accounting service. The Gas accounting service of OJSC "Odesagas" submits the information to the Gas supply regime department for its processing into basic form by "Atlas SYBIL" program. Gas supply data processed by "Atlas SYBIL" program are provided to the project developer "VEMA S.A.". The information regarding natural gas consumption by the individuals comes to the

customer service department of OJSC “Odesagas” in form of paid bills by the consumers. The department for control of gas consumption by consumers for Odesa MPU also conducts monthly inspections of meters, issues the statement, signed by the individual, and forwards it to the customer service department of OJSC “Odesagas”. The customer service department processes the received information and record it into “Gasolina” program. The data on natural gas supply volume processed by «Gasolina» program are then provided to “VEMA S.A.”. The length of gas distribution systems implemented under the project is recorded by the technical and assembly service of OJSC “Odesagas”.

On the whole, the monitoring plan 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, 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 BVC’s conclusion are described in Appendix A, Table 2 (refer to CAR28, CAR29, CAR30, CAR31, CAR32, CAR33, CAR34, CAR35, FAR1).

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.

The PDD indicates that CO_2 emissions from fuel combustion during transportation of fuel oil and coal to the end user are the leakage source. However, these emissions are not under control of the project participants, can not be measured and are considered to be absent in the project scenario, thus they were neglected.

Therefore, leakage emissions are considered zero.

The identified areas of concern as to the leakage, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR36).

4.9 Estimation of emission reductions (42-47)

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

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are 7105431 tons of CO2eq for 2004-2007, 9500422 tons of CO2eq for 2008-2012 and 15611216 for 2013-2020;

(b) Leakage, which is considered equal zero tons of CO_2eq;

(c) Emissions for the baseline scenario (within the project boundary), which are 10681598 tons of CO2eq for 2004-2007, 14299727 tons of CO2eq for 2008-2012 and 23467328 for 2013-2020;

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 3576167 tons of CO2eq for 2004-2007, 4799305 tons of CO2eq for 2008-2012 and 7856112 for 2013-2020.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 01/01/2004 to 31/12/2020, covering the whole crediting period;

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

(d) For each GHG gas, which are CO_2 and CH_4;

(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 formulas used for calculating the estimates referred above are the same as those used for project monitoring and described in the section 4.7 above. All formulas are consistent throughout the PDD.

For calculating the estimates referred to above, key factors, 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 actual historical monitored data, forecasts, national officially approved data on CO_2 emission factor for Ukrainian power grid, National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine etc., are clearly identified, reliable and transparent.

Emission factors, such as CO_2 emission factor for power grid of Ukraine, carbon emission factor for natural gas combustion, default methane emission factor for technological gas equipment at the end user, default methane emission factor for natural gas transportation and distribution 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 is calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

The identified areas of concern as to the estimation of emission reductions, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR37, CAR38, CAR39).

4.10 Environmental impacts (48)

According to the Ukrainian legislation, the projects of new construction of gas distribution networks must include Environmental Impact Assessment (EIA), the basic requirements of which are provided in the State building norms of Ukraine A.2.2-1-2003 "The composition and content of environmental impact assessment (EIA) in the design and construction of plants, buildings and structures".

OJSC "Odesagas" has the necessary Environmental Impact Assessment for all gas distribution networks projects in accordance with Ukrainian legislation. EIA of the projects are developed by the subcontracting design and assembling organizations and are presented as separate chapters in the reconstruction projects of OJSC "Odesagas".

Completed analysis of the project's impact on the environment showed that all factors considered, it can be concluded that in the normal technical operational mode the project will neither cause any negative processes in the environment of the region, nor lead to any negative social and economic consequences and the risk of accidents, and its possible impact is minimized.

Transboundary impacts from the project activity according to their definition in the text of "Convention on transboundary long-distance pollution", ratified by Ukraine, will not take place.

The identified areas of concern as to the environmental impacts, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR40).

4.11 Stakeholder consultation (49)

In pursuance to the Law of Ukraine "On planning and development of the areas" and the Law of Ukraine "On ecological examination" OJSC "Odesagas" makes the information concerning project measures implementation publicly available through local mass media. All received comments regarding project activity implementation were of the positive nature. No negative comments in respect of current project were gained.

The identified areas of concern as to the stakeholder consultation, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR41).

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 a determination of the "Reduction of greenhouse gases emissions by gasification of Odesa region" Project in Odesa region, 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 participants 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 two pending issues 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 and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 2 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 02) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

7 REFERENCES

Category 1 Documents:
Documents provided by the project participants that relate directly to the GHG components of the project.

/1/ PDD “Reduction of greenhouse gases emissions by gasification of Odesa region” , version 1 dated 01/06/2011

/2/ PDD “Reduction of greenhouse gases emissions by gasification of Odesa region”, version 2 dated 05/08/2011

/3/ Accompanying document 1.1.1 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for Odesa interdistrict individuals (OID GFOA)

/4/ Accompanying document 1.1.2 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for Odesa interdistrict individuals (OID GFOA) (continuation)

/5/ Accompanying document 1.2 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Ananyevsk district

/6/ Accompanying document 1.3 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Balta district

/7/ Accompanying document 1.4 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in B-Dnistrovsk district

/8/ Accompanying document 1.5 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Berezivka district

/9/ Accompanying document 1.6 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Illichivsk district

/10/ Accompanying document 1.7 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Izmail district

/11/ Accompanying document 1.8 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Lubashevsk district

/12/ Accompanying document 1.9 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Razdelyansk district

/13/ Accompanying document 1.10 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Shyryaevo district

/14/ Accompanying document 1.11Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Artsyzk district

/15/ Accompanying document 1.12 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Ivanove district

/16/ Accompanying document 1.13 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Kotovsk district

/17/ Accompanying document 1.14 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Ovidiopol district

/18/ Accompanying document 1.15 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Reni district

/19/ Accompanying document 1.16 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for individuals in Odesa city

/20/ Accompanying document 1.17 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region” for legal entities in Odesa region

/21/ Accompanying document 1.18 Calculation of emission reductions under the project “Reduction of greenhouse gases emissions by gasification of Odesa region”. Accumulated table of all consumers of Odesa region.

/22/ Accompanying document 2 Under the project “Reduction of greenhouse gases emissions by gasification of Odesa region”. Investment analysis

/23/ Accompanying document 3 Registry of gas equipment that is planned for implementation under the project “Reduction of greenhouse gases emissions by gasification of Odesa region”

/24/ Letter of Endorsement №1949/23/7 on the JI project “Reduction of greenhouse gases emissions by gasification of Odesa region” dated 26 July, 2011, issued by State Environmental Investment Agency of Ukraine

/25/ Minutes of the OJSC «Odessagas» board meeting regarding JI project implementation dated 17/06/2003

Category 2 Documents:

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

/1/ Guidelines for Users of the Join Implementation Project Design Document Form, version 04, JISC

/2/ Joint Implementation Project Design Document Form, version 01

/3/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC

/4/ Glossary of JI terms, version 03, JISC

/5/ Tool for the demonstration and assessment of additionality, Version 05.2

/6/ JISC “Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee.” Version 03

/7/ Approved CDM methodology ACM0009 «Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas», Version 3.2

/8/ National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2009

/9/ Report «Determination of change of specific energy data of heat supply system in the course of gasification", developed by 'Ukrenergoprom-2" of 24/06/2011

/10/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006

/11/ Law of Ukraine "On functioning of natural gas market"

/12/ Decree of Cabinet of Ministers of Ukraine N983 dated 04/09/2002 "On approval of the method of calculating tariffs for the transportation and supply of natural gas for gas supply and gasification companies"

/13/ State building norms DBN A.2.2-1-2003 "Structure and Content of Environmental Impact Assessment (EIA) when Designing and Constructing Factories, Buildings and Structures"

/14/ Operational Guidelines for Project Design Documents of Joint Implementation Projects, Volume 1: General guidelines, version 2.3, Ministry of Economic Affairs of the Netherlands

/15/ "Ukraine - Assessment of new calculation of CEF", approved by TUV SUD of 17/08/2007

/16/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 43 of 28/03/2011 on approval of specific carbon dioxide emission indicators for 2010

/17/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 62 of 15/04/2011 on approval of specific carbon dioxide emission indicators for 2008

/18/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 63 of 15/04/2011 on approval of specific carbon dioxide emission indicators for 2009

/19/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 75 of 12/05/2011 on approval of specific carbon dioxide emission indicators for 2011

/20/ Operating environment software "Sibylle". Extract from the log of actual gas consumption for the period from 01.2005 to 12.2005

/21/ Operating environment software "Gasoline." Extract from the log of actual gas consumption for the period from 10.2009 to 08.2011 subscriber to personal accounts 088248

/22/ Act of submitting / receiving natural gas for February 2005. Act of Feb. 28, 2005 between the condominiums "Dyukovskyy", responsible for Gas Improvement Kirikov YS and OJSC "Odesagas" controller AWG Svyschevska Y.

/23/ Act of submitting / receiving natural gas for May 2005. Act of May 31, 2005 between the condominiums "Dyukovskyy", responsible for Gas Improvement Kirikov YS and OJSC "Odesagas" controller AWG Borovko IV

/24/ Act of submitting / receiving natural gas for March 2006. Act of

March 31, 2006 between OJSC "YURTAL" responsible Volokhin VP and OJSC "Odesagas" controller AWG Ulyanov EV

/25/ Act of submitting / receiving natural gas for April 2006. Act of April 30, 2006 between IE "Monolith Eksposervis" responsible Babany GA and OJSC "Odesagas" controller AWG Albul L.A.

/26/ Act submitting / receiving natural gas for April 2006. Act of April 30, 2006 between the Company "Maksan" responsible Babich PA and OJSC "Odesagas" controller AWG Ulyanov EV

/27/ Kominternovskoe regional state administration. The main type of fuel used in settlements Kominternivskyy area to gasification

/28/ Annex to the Order of transfers of undertakings on reserve fuel approval from CMU 25.03.09, № 263. Schedule transfer of industrial enterprises (Odessa region) to reserve fuel for the heating season 2011/2012

/29/ Act of submitting/receiving of fixed assets in commissioning of OJSC "Odesagas"

/30/ Acceptance of the completed construction of the facility gas supply system. Low-pressure pipeline. Gasification of block of flats in Bolgrad st. 25 Chapajevs'kyi diviziyi 65

/31/ Schedule of the state verification of the domestic gas meters in UEGH for 2009

/32/ Schedule of the state verification of the domestic gas meters in UEGH for 2010

/33/ Schedule of the state verification of the domestic gas meters in UEGH for 2011

/34/ Statement №312 to the act from the individual with the request for calibration

/35/ Act №324 on withdrawal and transfer of gas meter for calibration. Contract № 005173

/36/ Act №139 on the installation of gas meter after calibration

/37/ Payable receipt №010437 for natural gas consumption based on gas meter

/38/ Information on calibration of existing gas meters and note on existing debt

/39/ Electronic database (file K0050-C of 13/03/2010) on natural gas consumption by individuals

/40/ Logbook for registration of acts on removal and installation of natural gas meters after verification in the KBO

Persons interviewed:

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

/1/ Olena Hisko – head of the programming department

/2/ Serhii Stryzhak – head of the street pipelines and yard input

service

/3/ Natalia Orlova – head of the planning and technical department

/4/ Anton Serpynsky –JI project consultant of VEMA S.A.

/5/ Yevgen Vorobyov – JI project consultant of VEMA S.A.

APPENDIX A: JI PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

DETERMINATION PROTOCOL

Table 1. Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Ver. 01)

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
Guidelines for JI PDD Form Users Section A General description of the project				
A.1. Title of the project				
A.1	Is the title of the project presented?	The title of the project is provided in the section A.1. of the PDD.	OK	OK
A.1	Is the sectoral scope to which project pertains presented?	**CAR01** Please, correctly define sectoral scope to which project pertains and provide this information in the section A.1. of the PDD.	**CAR01**	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
A.1	Is the current version number of the document presented?	The current version is presented the in section A.1. of the PDD.	OK	OK
A.1	Is the date when the document was completed presented?	The date of document completion is also presented in the section A.1. of the PDD.	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: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description).	No, the information regarding baseline scenario is missing. **CAR02** Please, add to the section A.2. of the PDD the description of baseline scenario as per *Guidelines for users of the JI PDD form (version 04).* **CAR03** Please, provide the interpretation for abbreviations and abridgments in the PDD when first mentioned in the text.	**CAR02** **CAR03**	OK OK
A.2	Is the history of the project (incl. its JI component) briefly summarized?	**CAR04** Please, add to the section A.2. of the PDD short description of the project including its JI component.	**CAR04**	OK
A.3 Project participants				
A.3	Are project participants and Party(ies) involved in the project listed?	Yes, project participants and Parties involved are provided in the corresponding sections of the PDD.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
A.3	Is the data of the project participants presented in tabular format?	Yes. See section A.3. of the PDD.	OK	OK
A.3	Is contact information provided in Annex 1 of the PDD?	The contact information is provided in the Annex 1 of the PDD		
A.3	Is it indicated, if it is the case, if the Party involved is a host Party?	It is indicated in the PDD that Ukraine is a host Party.	OK	OK
A.4 Technical description of the project				
A.4.1	Location of the project	The information concerning project location is provided in the sections A.4.1.	OK	OK
A.4.1.1	Host Party(ies)	The project is located on the territory of Ukraine.	OK	OK
A.4.1.2	Region/State/Province etc.	See section A.4.1.2 of the PDD	OK	OK
A.4.1.3	City/Town/Community etc.	**CAR05** Please, add the information concerning project location to the section A.4.1.3.	**CAR05**	OK
A.4.1.4	Detail of the physical location, including information allowing the unique identification of the project. (This section should not	The geographical location of the project is provided in the section A.4.1.4 of the PDD.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	exceed one page)			
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?	**CAR06** Please, add to the PDD information on implementation schedule for each type of measures envisaged by the project. **CAR07** It is stated in the PDD that the project provides for construction and reconstruction of gas distribution station. However, during site visit it was revealed that these measures can not be included in the project boundary, because the company is not an owner of the gas distribution stations.	**CAR06** **CAR07**	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 explained briefly how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page.)	The project implementation will promote the switch from solid, liquid fuels to more sustainable fuel - natural gas, which will lead to significant reductions in greenhouse gas emissions. The project also provides for emissions	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
		reductions resulting from replacement of electricity, used for heating and hot water supply purposes, with natural gas.		
A.4.3	Is it provided the estimation of emission reductions over the crediting period?	**CAR08** Please, compare the values of ERUs, stated in the section A.4.3.1., the section E and supporting document Excel file and provide correct values in the PDD.	**CAR08**	OK OK
A.4.3	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	Conclusion is pending a response to CAR in the section A.4.3. above.	Pending	OK
A.4.3	Are the data from questions above presented in tabular format?	**CAR09** Please, correct formatting of the section A.4.3.1. as per *Guidelines for users of the JI PDD form (version 04).*	**CAR09**	OK
DVM				
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR10** The project has no approval of the host Party and the sponsor Parties. Please submit corresponding approvals to AIE.	**CAR10**	Pending
19	Does the PDD identify at least the host Party as a "Party	Ukraine is identified as the Host Party.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	involved"?			
19	Has the DFP of the host Party issued a written project approval?	See CAR from the section 19 above.	Pending	Pending
20	Are all the written project approvals by Parties involved unconditional?	Conclusion is pending a response to CAR in the section 20. above.	Pending	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 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?	**CAR11** The authorization of the legal entities involved in the project is absent.	**CAR11**	Pending
Baseline setting				
22	Does the PDD explicitly indicate which of the following	**CAR12** Please, indicate in the PDD if the	**CAR12** **CL01**	OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	elements of any approved CDM methodology were used for baseline establishment. **CL01** It seems unlikely that an alternative which provides a partial implementation of project activities may be considered in the context of the present project. Please, provide evidence that the alternative 1.3. can be considered as the plausible scenario to establish the baseline for the project.		
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	A satisfactory description is provided in the section B.1. of the PDD in a complete manner. **CAR13** Please, add to the Annex 2 of the PDD all key elements used to establish baseline (in a tabular form).	**CAR13**	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing	**CAR14** Please, note that the value of parameters "lower heating value of natural gas" and "lower heating value of	**CAR14** **CAR15** **CAR16**	OK OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	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? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeur? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on	fuel type «fuel», which are used to establish GHG emissions in the baseline scenario, do not depend on the type of consumers (individuals or legal persons). Please make the appropriate corrections to the methodology for calculating baseline emissions, taking into account this information. **CAR15** Please, for each of the key parameters indicated in the section B.1 provide clear justification of the choice of data or description of measurement methods and procedures (to be) applied in accordance with *Guidelines for users of the JI PDD form version 04*. **CAR16** Please, clearly indicate in the section B.1. of the PDD the condition when each of the parameters "the average coefficient of efficiency" (k1-k4, k7) is applied for calculating the baseline GHG emissions for each individual consumer.		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	criteria for baseline setting and monitoring", as appropriate?			
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 own developed approach is used to establish a baseline. Generally, the additional elements developed by the project participants are clearly justified and sufficiently described in the section B of the PDD.	OK	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	**CAR17** In "carbon emission factor for fossil fuel of «fuel» type" is used for establishing the baseline emissions. Please, add the explanations and the necessary references to justify using of this parameter for the present project. Specify QA/QC procedures (to be) applied be applied for this parameter.	**CAR17**	OK
Approved CDM methodology approach only				
26 (a)	Does the PDD provide the title,	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	reference number and version of the approved CDM methodology used?			
26 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	N/A	N/A	N/A
26 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	N/A	N/A	N/A
26 (c)	Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?	N/A	N/A	N/A
26 (d)	Is the baseline identified appropriately as a result?	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
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	It is stated in the PDD that that the project scenario is not a part of the identified baseline scenario and that the project will lead to emission reductions. *Tool for the demonstration and assessment of additionality* was used for demonstrating of the project additionality. **CAR18** Using a simple cost analysis can not be applied for the present project. Please, provide additionality analysis using benchmark analysis. **CAR19** Please, provide a reference to natural gas prices (purchase and sale). Since the prices of natural gas are different for individuals and legal entities, this must be taken into account in calculations. **CAR20** Please, indicate the source of data on investment costs for the project. If total	**CAR18** **CAR19** **CAR20** **CAR21** **CAR22** **CL02**	OK OK OK OK OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	recent version 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".	investment costs were used in hryvnias, than exchange rates for relevant years must be used while converting. Please check and make corresponding alterations. **CAR21** Since the calculation was conducted in current prices using the WACC nominal rate as the benchmark, please, adjust the fair value of the assets by some inflation factor in the same way as it was done for operational revenues/expenses. **CAR22** Sensitivity analysis of the project does not include the information on scenarios and tables under consideration, which would allow the reader to recreate the results. Besides, the table on the page 34 does not fully coincide with the relevant table provided in the Excel financial model. For this project it would be appropriate to consider the sensitivity of two indexes modification – price on natural gas and investment costs amount		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
		in the range of +-10%. **CL02** Please, indicate whether tariffs, costs and investment values are indicated with VAT included or not. Pay attention that the general approach envisages calculations without taking into account VAT in the relevant values. If the enterprise is not a taxpayer, the calculations should include VAT.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	See CARs in the section 28 above.	Pending	OK
29 (b)	Are additionality proofs provided?	Yes. See section B.2. of the PDD.	OK	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	See CARs and CLs in the section 28 above.	Pending	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	See CARs in the section 28 above.	Pending	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
Approved CDM methodology approach only				
31 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	N/A	N/A	N/A
31 (b)	Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project?	N/A	N/A	N/A
31 (c)	Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology?	N/A	N/A	N/A
31 (d)	Are additionality proofs provided?	N/A	N/A	N/A
31 (e)	Is the additionality demonstrated appropriately as a result?	N/A	N/A	N/A
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass	The review of emission sources in the project scenario is demonstrated in the	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	PDD. The respective information is provided in the PDD, section B.3.		
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?	**CAR23** The GHG emission sources listed in the section B.3. do not coincide with those provided by the methodology of baseline emissions calculation. Please, make corrections.	**CAR23**	OK
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 as appropriate?	See CARs and CLs in the section 32 (b) above.	Pending	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the	See CARs and CLs in the section 32 (b) above	Pending	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	project are appropriately justified?			
Approved CDM methodology approach only				
33	Is the project boundary defined in accordance with the approved CDM methodology?	N/A	N/A	N/A
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?	**CAR24** Please, state in the PDD the actual starting date of the project which is indicated in the documentation on JI project realization at OJSC "Odesagas".	**CAR24**	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes. The starting date is after the beginning of 2000.	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	**CAR25** Please, indicate in the section C the expected operational lifetime of the project in years and months.	**CAR25**	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	**CAR26** Please, provide the length of the crediting period taking into account the project starting date and the crediting period length stated in the section A of the PDD.	**CAR26**	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	See CAR in the section 34 (c) above.	Pending	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?	See CAR in the section 34 (c) above.	Pending	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?	**CAR27** No. The necessary information as to emission reductions before 2012 and after 2012 must bee added to the section C of the PDD.	**CAR27**	OK
Monitoring plan				
35	Does the PDD explicitly indicate	The own developed JI specific on the	**CAR28**	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	which of the following approaches is used? −JI specific approach −Approved CDM methodology approach	basis of the elements of approved CDM methodology was used to establish the monitoring plan. **CAR28** All equations in the section D of the PDD must be numbered as per *Guidance on criteria for baseline setting and monitoring.* Please, make corresponding corrections.		
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	**CAR29** Pease, for each of the parameters listed in Tables D.1.1.1 and D.1.1.3, specify the actual value of the period and frequency of monitoring, and Justification of the choice of data or description of measurement methods and procedures (to be) applied, according to *Guidelines for users of the JI PDD form version 04.*	**CAR29**	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide	**CAR30** All the monitored baseline and project parameters must be added to the monitoring plan in the sections D.1.1.1	**CAR30**	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	transparent picture of the emission reductions or enhancements of net removals to be monitored?	and D.1.1.3. of the PDD as per *Guidelines for users of the JI PDD form (version 04).*		
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 confidence levels? − Are the default values presented in a transparent manner?	**CAR31** The monitoring of emission factor for Ukrainian electricity grid must be provided in the PDD. The necessary justification for used data sources must be indicated.	**CAR31**	OK
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?	See CAR from the item 36 (a) above.	Pending	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
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?	See CAR from the item 36 (a) above.	Pending	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	See CAR from the item 36 (a) above.	Pending	OK
36 (b) (iv)	Are International System Unit (SI units) used?	The International System Unit is used for some 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?	See CAR from the item 36 (a) above.	Pending	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients, variables, etc. is consistent between the baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw	Some variables contained in appendix B	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	of "*Guidance on criteria for baseline setting and monitoring*" were included in the monitoring plan.		
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 already available at the stage of determination?	**CAR32** Please, after making alteration of the monitoring plan and adding of all necessary parameters to be monitored, explicitly 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 available at the stage of determination; (iii) Data and parameters that are monitored throughout the crediting	**CAR32**	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	(iii) Data and parameters that are monitored throughout the crediting period?	period.		
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	Yes. This information is included in the monitoring plan.	OK	OK
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?	**CAR33** PDD should provide monitoring of the GHG emissions from burning of gaseous fuel by gas turbine plants for transportation of natural gas to consumers. The algorithms and formulae used to for their estimation/calculation must be included in the section D.1.1.2. of the PDD.	**CAR33**	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Pending a response to CARs in the items 35 (a) - 36 (f) above.	Pending	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Pending a response to CARs in the items 35 (a) - 36 (f) above.	Pending	OK
36 (f) (iii)	Are all equations numbered?	No see CAR from the item 35 above.	Pending	OK
36 (f) (iv)	Are all variables, with units	Pending a response to CARs in the items	Pending	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	indicated defined?	35 (a) - 36 (f) above.		
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes, algorithms/procedures used are in line with the state norms and used in conservative manner.	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	The uncertainties for the parameters used are generally low taking into account monitoring algorithm.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	Pending a response to CARs in the items 35 (a) - 36 (f) above.	Pending	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	All algorithms and formulas are clearly explained.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	The procedure is consistent with standard technical procedures in the relevant sector and is well justified.	OK	OK
36 (f) (vii)	Are references provided as necessary?	All necessary references are provided.	OK	OK
36 (f) (vii)	Are implicit and explicit key	All implicit and explicit assumptions are	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	assumptions explained in a transparent manner?	explained in a transparent manner.		
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?	**CAR34** Please, include all key monitored parameters to the table D.2., describe uncertainties and quality assurance procedures associated with them.	**CAR34**	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?	See CAR form the item 36 (f) (vii) above.	Pending	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? Does the monitoring plan	The monitoring plan is in line with the relevant national standards.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	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?	N/A	N/A	N/A
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?	See CAR form the item 36 (f) (vii) above.	Pending	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	**CAR35** Please, add to the PDD (section D.3.) scheme identifying the responsibilities and roles establishing in the context project of monitoring plan.	**CAR35**	OK
36 (k)	Does the monitoring plan, on the whole, reflect good	The monitoring plan reflects good monitoring practices appropriate to the	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	project type.		
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?	Yes. The appropriate information is indicated in the section D of the PDD.	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?	**FAR1** Please, submit any documented instruction indicating that the data monitored are to be kept for two years after last ERUs transfer as per *JI determination and verification manual.*	**FAR1**	This issue must be checked during verification.
37	If selected elements or combinations of approved CDM	Yes. The selected elements of the applied approved CDM methodology	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	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?	together with elements supplementary developed by the project participants are in line with the item 36 above.		
Approved CDM methodology approach only				
38 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	N/A	N/A	N/A
38 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	N/A	N/A	N/A
38 (b)	Does the PDD provide a	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	description of why the approved CDM methodology is applicable to the project?			
38 (c)	Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?	N/A	N/A	N/A
38 (d)	Is the monitoring plan established appropriately as a result?	N/A	N/A	N/A
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (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	There are no overlapping monitoring periods during the crediting period.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	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 JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	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?	**CAR36** According to the proposed methodology, changes of GHG emissions due to fuel transportation to consumers are accounted by applying the correction factor. Therefore, emissions from oil and coal transportation to the consumers can not be considered as leakage. Please, make corresponding corrections.	**CAR36**	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	See CL form the issue 40 (b) above.	Pending	OK
Approved CDM methodology approach only				
41	Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?	N/A	N/A	N/A
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	The assessment of emissions in the baseline scenario and in the project scenario was used.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	scenario (b) Direct assessment of emission reductions			
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)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	The amount of electricity losses is established on the basis of statistical dependence of actual volumes of losses. Calculations are provided in the *Supporting Excel files*. The estimation of GHG emissions for the project, baseline scenario and emission reductions ex ante is provided in the section E of the PDD.	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	enhancements of net removals adjusted by leakage?			
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 tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in	**CAR37** Algorithm of project and baseline emissions estimation for each gas and emission source must be clearly indicted in the section E of the PDD. Please, explain which data (actual or historical) were used for ERUs estimation. **CAR38** The amounts of ERUs estimates in the Excel file and in the PDD are not equal. Please, make corresponding corrections. **CAR39** Information concerning emission sources in the project is missing in the section E. Please, add the appropriate information to the PDD.	**CAR37** **CAR38** **CAR39**	OK OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	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			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	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 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 ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Yes, the illustrative ex ante emission calculations are presented in the PDD.	OK	OK
Approved CDM methodology approach only				
47 (a)	Is the estimation of emission reductions or enhancements of net removals made in	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	accordance with the approved CDM methodology?			
47 (b)	Is the estimation of emission reductions or enhancements of net removals presented in the PDD: − On a periodic basis? − At least from the beginning until the end of the crediting period? − On a source-by-source/sink-by-sink basis? − For each GHG? − In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? − Are the formula used for calculating the estimates consistent throughout the PDD? − Are the estimates consistent throughout the	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	PDD? − Is the annual average of estimated emission reductions or enhancements of 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?			
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?	**CAR40** Please, provide in the PDD information on environmental impact assessment for the project and provide the necessary documentation.	**CAR40**	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,	Pending a response to CARs in the items 48 above.	Pending	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft conclusion	Final conclusion
	does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?			
Stakeholder consultation				
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?	**CAR41** OJSC "Odesagas" conducted EIA for new construction within the project. This envisages providing consultation with stakeholders according to the legislation of Ukraine. Please add the relevant information to the PDD.	**CAR41**	OK

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications, corrective action and forward action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR01 Please, correctly define sectoral scope to which project pertains and provide this information in the section A.1. of the PDD.	A.1	The corresponding corrections were made in the PDD version 2.	PDD was checked. The issue is closed.
CAR02 Please, add to the section A.2. of the PDD the description of baseline scenario as per *Guidelines for users of the JI PDD form (version 04).*	A.2	The description of baseline scenario was added to the section A.2 of the PDD version 2.	The issue is closed based on due amendments made in the PDD.
CAR03 Please, provide the interpretation for abbreviations and abridgments in the PDD when first mentioned in the text.	A.2	The corresponding interpretation for abbreviations and abridgments are provided in the PDD version 2.	PDD was checked. The issue is closed.
CAR04 Please, add to the section A.2. of the PDD short description of the project including its JI component.	A.2	The respective information was added to the section A.2 of the PDD version 2.	PDD was checked. The issue is closed.

CAR05 Please, add the information concerning project location to the section A.4.1.3.	A.4.1.3	The respective information was added to the section A.4.1.3 of the PDD version 2.	PDD was checked. The issue is closed.
CAR06 Please, add to the PDD information on implementation schedule for each type of measures envisaged by the project.	A.4.2	The yearly implementation schedule for each type of measures including quantitative characteristics are provided in the PDD version 2.	The issue is closed on the basis of the corrections made in the PDD.
CAR07 It is stated in the PDD that the project provides for construction and reconstruction of gas distribution station. However, during site visit it was revealed that these measures can not be included in the project boundary, because the company is not an owner of the gas distribution stations.	A.4.2	The construction of gas distribution stations was excluded form the project boundaries as they are not owned by the company. Corresponding corrections were made in the PDD version 2.	The issue is closed on the basis of the corrections made in the PDD.
CAR08 Please, compare the values of ERUs, stated in the section A.4.3.1., the section E and supporting document Excel file and provide correct values in the PDD.	A.4.3	The values of ERUs were recalculated taking into account the issued request.	The issue is closed on the basis of the corrections made in the PDD.
CAR09 Please, correct formatting of the	A.4.3	Formatting of the Table A.4.3.1 was corrected as per *Guidelines for users of*	PDD was checked.

section A.4.3.1. as per *Guidelines for users of the JI PDD form (version 04).*		*the JI PDD form (version 04).*	The issue is closed.
CAR10 The project has no approval of the host Party and the sponsor Parties. Please submit corresponding approvals to AIE.	19	After determination the project, the PDD and Determination report will be submitted to the State Environmental Investment Agency of Ukraine to obtain a Letter of Approval.	The conclusion is pending written approvals by the Parties involved.
CAR11 The authorization of the legal entities involved in the project is absent.	21	After determination the project, the PDD and Determination report will be submitted to the State Environmental Investment Agency of Ukraine to obtain a Letter of Approval.	The conclusion is pending written approvals by the Parties involved.
CAR12 Please, indicate in the PDD if the elements of any approved CDM methodology were used for baseline establishment.	22	The project applies the JI specific approach to establish baseline on the basis of approved methodology ACM0009 «Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas». This information was added to the section B of the PDD version 2.	The issue is closed on the basis of correction made in the PDD.
CAR13 Please, add to the Annex 2 of the PDD all key elements used to establish baseline (in a tabular form).	23	The description of the key elements in the tabular form was added to the Annex 2 of the PDD ver.2.	PDD was checked. The issue is closed.
CAR14	23	The methodology of baseline emissions	The issue is closed on

Please, note that the value of parameters "lower heating value of natural gas" and "lower heating value of fuel type «fuel», which are used to establish GHG emissions in the baseline scenario, do not depend on the type of consumers (individuals or legal persons). Please make the appropriate corrections to the methodology for calculating baseline emissions, taking into account this information.		was appropriately corrected in the PDD version 2.	the basis of due amendments.
CAR15 Please, for each of the key parameters indicated in the section B.1 provide clear justification of the choice of data or description of measurement methods and procedures (to be) applied in accordance with *Guidelines for users of the JI PDD form version 04*.	23	The corresponding justification for each of the key parameters was added to the section B.1. of the PDD.	The issue is closed on the basis of due amendments made in the PDD.
CAR16 Please, clearly indicate in the section B.1. of the PDD the condition when each of the	23	$k^{b}_{1,prepfuel}$ and $k^{p}_{1,prepfuel}$ are applied in case of transfer of individual and central heat supply systems to gas.	The issue is closed on the basis of the information provided and due corrections

parameters "the average coefficient of efficiency" (k1-k4, k7) is applied for calculating the baseline GHG emissions for each individual consumer.		$k^{b}_{2,transfuel}$ and $k^{p}_{2,transfuel}$ are applied in case of transfer of individual and central heat supply systems to gas. $k^{b}_{3,ef}$ and $k^{p}_{3,ef}$ are applied in case of transfer of individual and central heat supply systems to gas. $k^{b}_{4,pipes}$ and $k^{p}_{4,pipes}$ are applied in case of transfer of individual and central heat supply systems to gas. $k_{7,fuel}$ is applied only to individuals who were previously connected to central heating system. The necessary corrections were made in the PDD version 2.	made in the PDD.
CAR17 In "carbon emission factor for fossil fuel of «fuel» type" is used for establishing the baseline emissions. Please, add the explanations and the necessary references to justify using of this parameter for the present project. Specify QA/QC procedures (to be) applied be applied for this parameter.	25	The respective explanations and references for justification of the parameter using of the current project is provided in the PDD version 2.	
CAR18 Using a simple cost analysis can not be applied for the present project. Please, provide	28	The financial analysis of the project's additionality by using benchmark analysis is provided in the section B.2.	PDD was checked. The issue is closed.

additionality analysis using benchmark analysis.		of the PDD.	
CAR19 Please, provide a reference to natural gas prices (purchase and sale). Since the prices of natural gas are different for individuals and legal entities, this must be taken into account in calculations.	28	The financial model was corrected taking into account issued requests. The corresponding corrections are made in the PDD version 2 and supporting document.	The issue is closed on the basis of the corrections made in the PDD and supporting document.
CAR20 Please, indicate the source of data on investment costs for the project. If total investment costs were used in hryvnias, than exchange rates for relevant years must be used while converting. Please check and make corresponding alterations.	28	The financial model was corrected taking into account issued requests. The corresponding corrections are made in the PDD version 2 and supporting document.	The issue is closed on the basis of the corrections made in the PDD and supporting document.
CAR21 Since the calculation was conducted in current prices using the WACC nominal rate as the benchmark, please, adjust the fair value of the assets by some inflation factor in the same way as it was done for operational	28	The fair value was corrected taking into account the inflation factor. The necessary corrections were made in the PDD and the financial model.	PDD was checked. The issue is closed.

revenues/expenses.			
CAR22 Sensitivity analysis of the project does not include the information on scenarios and tables under consideration, which would allow the reader to recreate the results. Besides, the table on the page 34 does not fully coincide with the relevant table provided in the Excel financial model. For this project it would be appropriate to consider the sensitivity of two indexes modification – price on natural gas and investment costs amount in the range of +-10%.	28	The corresponding corrections were made in the PDD version 2. The sensitivity analysis was supplemented with the information on scenarios and tables, which would allow recreating the results.	The issue is closed on the basis of the corrections made in the PDD and supporting document.
CAR23 The GHG emission sources listed in the section B.3. do not coincide with those provided by the methodology of baseline emissions calculation. Please, make corrections.	32 (b)	The CAR was taken into account I the PDD ver.2. The section B.3 contains the baseline scenario boundary scheme and greenhouse gas sources as well as boundaries of the project scenario, which is in compliance with the methodology.	The issue is closed on the basis of due corrections made in the PDD.
CAR24 Please, state in the PDD the actual starting date of the	34 (a)	The appropriate corrections were made in the PDD version 2.	PDD was checked. The issue is closed.

project which is indicated in the documentation on JI project realization at OJSC "Odesagas".			
CAR25 Please, indicate in the section C the expected operational lifetime of the project in years and months.	34 (b)	The appropriate corrections were made in the PDD version 2.	PDD was checked. The issue is closed.
CAR26 Please, provide the length of the crediting period taking into account the project starting date and the crediting period length stated in the section A of the PDD.	34 (c)	The appropriate corrections were made in the section C of the PDD version 2.	PDD was checked. The issue is closed.
CAR27 No. The necessary information as to emission reductions before 2012 and after 2012 must bee added to the section C of the PDD.	34 (d)	The information as to the expected emission reduction unit amount till 2012 and after 2012 was presented in the section C of the PDD version 2.	PDD was checked. The issue is closed.
CAR28 All equations in the section D of the PDD must be numbered as per *Guidance on criteria for baseline setting and monitoring.* Please, make corresponding corrections.	35	All equations in the section D of the PDD were numbered as per *Guidance on criteria for baseline setting and monitoring.*	PDD was checked. The issue is closed.

CAR29 Pease, for each of the parameters listed in Tables D.1.1.1 and D.1.1.3, specify the actual value of the period and frequency of monitoring, and Justification of the choice of data or description of measurement methods and procedures (to be) applied, according to *Guidelines for users of the JI PDD form version 04.*	36 (a)	The respective corrections were made in the section D of the PDD version 2.	PDD was checked. The issue is closed.
CAR30 All the monitored baseline and project parameters must be added to the monitoring plan in the sections D.1.1.1 and D.1.1.3. of the PDD as per *Guidelines for users of the JI PDD form (version 04).*	36 (b)	The methodology of emission reduction calculation was changed taking into account the observations. The corrected methodology was described in the section D of the PDD version 2. The monitoring plan was revised according to the corrected methodology.	The issue is closed based on the provided information and appropriate corrections made.
CAR31 The monitoring of emission factor for Ukrainian electricity grid must be provided in the PDD. The necessary justification for used data sources must be indicated.	36 (b)	The CAR has been taken into account I the PDD ver.2 and in the ERUs calculation. The CO_2 emission factors for 2004-2005 were taken from the "Operational Guidelines for Project Design Documents of Joint Implementation Projects Volume 1: General guidelines"	PDD was checked. The issue is closed.

		(ERUPT), issued by Ministry of Economic Affairs of the Netherlands. Carbon dioxide emission factors for 2006-2007 are taken from the document "Carbon dioxide emission factors (for energy consumption according to the methodology "Ukraine - Assessment of new calculation of CEF", approved by TUV SUD 17.08.2007); Carbon dioxide emission factors for 2008 are taken from Order of the National Environmental Investment Agency of Ukraine (hereinafter - NEIAU) № 62 of 15.04.2011 "On approval of specific carbon dioxide emission factors in 2008"; Carbon dioxide emission factors for 2009 are taken from the Order of NEIAU # 63 of 15.04.2011 "On approval of specific carbon dioxide emission factors in 2009"; Carbon dioxide emission factors for 2010 are taken from the Order of NEIAU # 43 of 28.03.2011. "On approval of specific carbon dioxide emission factors in 2010" Carbon dioxide emission factors for 2011 are taken from the Order of NEIAU # 75 of 12.05.2011. "On approval of	

		specific carbon dioxide emission factors in 2011".	
CAR32 Please, after making alteration of the monitoring plan and adding of all necessary parameters to be monitored, explicitly 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 available at the stage of determination; (iii) Data and parameters that are monitored throughout the crediting period.	36 (d)	All parameters of the monitoring plan, which was corrected taking into account all issued remarks, are divided into three groups: (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 available at the stage of determination; (iii) Data and parameters that are monitored throughout the crediting period. Indicated parameters were listed in the section D.1 of the PDD version 2.	The issue is closed on the basis of due amendments made in the PDD.
CAR33 PDD should provide monitoring	36 (f)	The methodology of baseline and project emissions calculation was altered to	The issue is closed on the basis of the due

of the GHG emissions from burning of gaseous fuel by gas turbine plants for transportation of natural gas to consumers. The algorithms and formulae used to for their estimation/calculation must be included in the section D.1.1.2. of the PDD.		consider emissions form each project equipment type, transmission line of various types etc. must be included in the sections D.1.1.2 and D.1.1.4 of the PDD. All necessary algorithms and formulae were included in the sections D.1.1.2 and D.1.1.4 of the PDD version 2.	corrections made in the PDD.
CAR34 Please, include all key monitored parameters to the table D.2., describe uncertainties and quality assurance procedures associated with them.	36 (f) (vii)	All parameters to be monitored including quality control and quality assurance procedures undertaken for data monitored were added to the section D.2 of the PDD.	The issue is closed on the basis of amendments made in the PDD.
CAR35 Please, add to the PDD (section D.3.) scheme identifying the responsibilities and roles establishing in the context project of monitoring plan.	36 (j)	The detailed information concerning responsibilities and roles distribution in the monitoring was included in the section D.3 of the PDD.	PDD was checked. The issue is closed.
CAR36 According to the proposed methodology, changes of GHG emissions due to fuel transportation to consumers are accounted by applying the correction factor. Therefore,	40 (a)	The project boundary, including leakages, was specified in the PDD ver.2. The respective corrections have been made in the sections B and D of the PDD.	The issue is closed based on the corrections made to the PDD.

emissions from oil and coal transportation to the consumers can not be considered as leakage. Please, make corresponding corrections.			
CAR37 Algorithm of project and baseline emissions estimation for each gas and emission source must be clearly indicted in the section E of the PDD. Please, explain which data (actual or historical) were used for ERUs estimation.	45	For the period before 2010 the estimated GHG emissions were calculated on the basis of actual data, for the period after 2011 the forecasted data according to the company development plan were used. Necessary information was added to the section E of the PDD.	The issue is closed based on the information provided and due corrections made in the PDD.
CAR38 The amounts of ERUs estimates in the Excel file and in the PDD are not equal. Please, make corresponding corrections.	45	The ERUs value was recalculated and the respective corrections were provided in the section E of the PDD version 2.	PDD and supporting documents were checked. The issue is closed.
CAR39 Information concerning emission sources in the project is missing in the section E. Please, add the appropriate information to the PDD.	45	The information concerning baseline and project GHG emissions by sources has been presented in the section E of the PDD ver.2.	The issue is closed on the basis of the information provided and due corrections made in the PDD.
CAR40 Please, provide in the PDD information on environmental impact assessment for the	48 (a)	The required documentation has been provided to the AIE. The information regarding Environmental Impact Assessment has been added to the PDD	The PDD and provided documentation were checked. The issue is closed.

project and provide the necessary documentation.		ver.2.	
CAR41 OJSC "Odesagas" conducted EIA for new construction within the project. This envisages providing consultation with stakeholders according to the legislation of Ukraine. Please add the relevant information to the PDD.	49	In pursuance of Art. 18 of the Law of Ukraine "On planning and development of areas" and Art. 11 of the Law of Ukraine "On ecological expertise",OJSC "Odesagas" informs the public through local media on the implementation of territory planning. This information has been included into the PDD ver.2	The issue is closed based on the information provided and appropriate corrections made to the PDD.
FAR1 Please, submit any documented instruction indicating that the data monitored are to be kept for two years after last ERUs transfer as per *JI determination and verification manual.*	36 (m)	The order on monitored data storage during two years after the last transfer of ERUs will be prepared and provided to the verifiers at the verification.	This issue must be checked during the verification process.
CL01 It seems unlikely that an alternative which provides a partial implementation of project activities may be considered in the context of the present project. Please, provide evidence that the alternative 1.3. can be considered as the plausible scenario to establish the baseline for the project.	22	Refer to the section B.1 of the PDD ver.2. The mentioned alternative has been excluded from the list of plausible alternatives during the baseline setting.	The issue is closed on the basis of information provided and corrections made.

CL02 Please, indicate whether tariffs, costs and investment values are indicated with VAT included or not. Pay attention that the general approach envisages calculations without taking into account VAT in the relevant values. If the enterprise is not a taxpayer, the calculations should include VAT.	28	The calculation of financial indicators was corrected according to the issued request.	The issue is closed based on the undertaken corrections to the calculations and amendment to the PDD.