# DETERMINATION REPORT

# CEP CARBON EMISSIONS PARTNERS S.A.

## DETERMINATION OF THE JI PROJECT

# Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz»

## REPORT NO. UKRAINE-DET/0459/2012

VERSION NO. 02

## BUREAU VERITAS CERTIFICATION

| Date of first issue: | Organizational unit: |
|---|---|
| 16/12/2011 | Bureau Veritas Certification Holding SAS |
| **Client:** | **Client ref.:** |
| CEP Carbon Emissions Partners S.A. | Fabian Knodel |

**Summary:**

Bureau Veritas Certification has made the determination of the "Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC "Poltavagaz" project of CEP Carbon Emissions Partners S.A. located in the city of Poltava, towns and settlements of Poltava region, Ukraine, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies 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/0459/2012 | JI |

**Project title:**

"Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC "Poltavagaz"

**Work is carried out by:**

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| Date of this revision: | Rev. No.: | Number of pages: |
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# 1 INTRODUCTION

CEP Carbon Emissions Partners S.A. has commissioned Bureau Veritas Certification to determine the JI project “Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC “Poltavagaz” (hereafter called “the project”) located in the territory of Poltava city, towns and settlements of Poltavskyi, Reshetylivskyi, Velyko-Bohachivskyi, Hlobinskyi, Dykanskyi, Zenkovskyi, Karlivskyi, Kobyliatskyi, Lokhvytskyi, Mashevskyi, Myrhorodskyi, Novo-Sanzharskyi and Chutovskyi districts of Poltava region, Ukraine.

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

## 1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project’s compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions units (ERUs).
UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

## 1.2 Scope

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

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

## 1.3 Determination team

The determination team consists of the following personnel:

Kateryna Zinevych
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Vasyl Kobzar
Bureau Veritas Certification Team Member, Climate Change Verifier

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

Oleksandr Kuzmenko
Bureau Veritas Certification Climate Change Specialist.

# 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, consisting of two tables, is enclosed in Appendix A to this report.

## 2.1 Review of Documents

The Project Design Document (PDD) submitted by CEP Carbon Emissions Partners S.A. and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, CEP Carbon Emissions Partners S.A. revised the PDD and resubmitted the PDD version 03 dated 15/02/2012.
The determination findings presented in this report relate to the project as described in the PDD versions 01, 02 and 03.

## 2.2 Follow-up Interviews

On 20/01/2012 Bureau Veritas Certification Determination team performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of PJSC "Poltavagaz" and CEP Carbon Emissions Partners S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

| Interviewed organization | Interview topics |
|---|---|
| PJSC «Poltavagaz» | ➢ Project history<br>➢ Project approach<br>➢ Project boundary<br>➢ Implementation Schedule<br>➢ Organizational structure<br>➢ Responsibilities and authorities<br>➢ Training of personnel<br>➢ Quality management procedures and technology<br>➢ Modernization /installation of equipment (records)<br>➢ Metering equipment control<br>➢ Metering record keeping system, database<br>➢ Technical documents<br>➢ Plan and procedures of monitoring<br>➢ Permissions and licenses<br>➢ Environmental impact assessment<br>➢ Stakeholders' responses |
| CEP Carbon Emissions Partners S.A. | ➢ Baseline methodology<br>➢ Monitoring plan<br>➢ Proof of additionality<br>➢ Emission reduction calculations<br>➢ Project design<br>➢ Legal issues related to the project<br>➢ Environmental impact<br>➢ Approval by the Host Party |

## 2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Action Request (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The JI requirements have not been met;

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

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

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

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

# 3 PROJECT DESCRIPTION

The purpose of the project is reduction of natural gas leaks at gas transport and gas distribution infrastructure of PJSC «Poltavagaz», which are the result of faulty sealing of gas equipment and fittings. The basic sources of leaks, included into the project boundary are:

- gas equipment (reducing gears, valves, filters, break switches, etc.), flanged and threaded joints located at gas distribution points (GDPs) and cabinet-type gas distribution points (CGDPs) of PJSC “Poltavagaz”;
- gas fittings (faucets, valve gates, screw valves, etc.), threaded and flanged joints located at gas pipelines of PJSC “Poltavagaz”.

The project boundary encompasses 642 GDPs, 1 852 CGDPs, and 5 047 gas fitting units at gas pipelines.

The main reason of natural gas leaks is failure of sealing elements of equipment caused by temperature fluctuations and moisture. Basic component of natural gas is methane (92 - 95%), which is greenhouse gas. Repair of natural gas leaks will result in a reduction of greenhouse gas emissions. Hereinafter, for determination of natural gas leaks the term «methane leaks» is used, since leak measurements refer to methane.

PJSC «Poltavagaz» is an enterprise that provides transportation and supply of natural gas to industrial enterprises (689), public-service facilities (4543), consumers and population (369 879 apartments and individual accommodation units) in the city of Poltava, towns and settlements of Poltava region, Ukraine.

The structure of existing tariffs for gas transportation regulated by the state does not take into account the amortization and investment needs of gas distribution enterprises. This leads to a lack of financing for repair works and modernization of gas networks, purchase of proper technological equipment and components, and, as a result, contributes to the increase of natural gas leaks at PJSC «Poltavagaz» facilities.

Before the launch of this project, an application of Joint Implementation Mechanism provided for by the Kyoto Protocol was planned. For this purpose, Moston Properties Limited and PJSC «Poltavagaz» signed Memorandum of understanding relating to the JI Project in February 2005.

Project activities are aimed at the reduction of methane leaks that occur as a result of faulty sealing of gas equipment of GDPs (CGDPs) and gas fittings of PJSC «Poltavagaz» gas pipelines.

Within the framework of the JI project in order to repair methane leaks at gas equipment and gas fittings three types of repairs are applied:

1. Complete replacement of old gas equipment and gas fittings with new units.
2. Repair of components of gas equipment and gas fittings.
3. Replacement of pressure-sealing elements with the use of modern sealing materials, changing the common practice of servicing and repair on the basis of paronite gaskets and sealing stuffing of cotton fibre with fatty impregnation and asbestos-graphite filler.

The existing practice of servicing and repair on the basis of paronite gaskets and sealing stuffing of cotton fibre with fatty impregnation and asbestos-graphite filler does not give a long-lasting effect of methane leak reductions.

As a result of JI project activities, in addition to methane leak reductions, technical losses of natural gas will decrease, a contribution will be made to the improvement of environmental situation, and the risk of accidents and explosions will be reduced.

Project activities will include:

- Implementation of Purposeful Examination and Technical Maintenance (PETM) of gas equipment of GDPs (CGDPs) and gas fittings, flanged and threaded joints. This is a modern and the most economically effective practice, which provides possibilities of not only detection of leak points but also determination of leak volume (i.e., potential gas leak reductions). This key information is required for substantiation of efficiency of repair works and priority choice of its objects, which is important under short financing for repair of all leaks. This activity will include the purchase and calibration of modern metering equipment, appropriate training of employees, monitoring of all gas equipment and fittings as well as flange and

threaded joints, creation of leak data collection and storage system, and implementation of internal audit and quality assurance system for repair and accounting of methane leaks;

- Detection and measurement of methane leaks: leak monitoring system at all gas equipment of GDPs (CGDPs), gas fittings (gate valves, faucets, screw valves), flanged and threaded joints, including repaired methane leaks (repaired components of equipment). Monitoring will be carried out on a regular basis by specially trained staff. Detected leak points will be duly marked with individual numbers; methane leak volumes will be measured and registered in the database;
- Repair of all leaks detected: repairs of leaking gas equipment of GDPs (CGDPs) and gas pipeline fittings under this project will vary from replacement of sealing elements by using pressure-sealing or new materials to major overhauls and replacement of gas equipment and gas fittings by new modern equipment. The repaired components of GDP (CGDP) gas equipment and gas pipeline fittings will be inspected regularly, as a part of standard monitoring activity, to make sure that they did not become the source of leaks again.

The project was initiated in February 2005:
In February 2005 an inspection of GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas pipelines of PJSC «Poltavagaz» and primary leak metering took place, the results of these measurements made the basis for setting the project baseline.
04/02/2005 – Moston Properties Limited (UK) and PJSC «Poltavagaz» signed the Memorandum of Understanding relating to the JI project. It was also stipulated in the contract, that Moston Properties Limited had to develop the emission monitoring programme and the JI Project Design Document (PDD).
07/02/2005 – a Working Team was created in order to ensure compliance with the JI project monitoring plan.
17/02/2005 – PJSC «Poltavagaz» approved the PDD (version 01), which included the programme of emission monitoring.
February 2005 – the start of inspection and repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz».
10/12/2010 – with the consent of PJSC «Poltavagaz», Moston Properties Limited assigned all its rights and obligations under the Memorandum of Understanding relating to the JI project to CEP Carbon Emissions Partners S.A. (Switzerland); on this ground CEP Carbon Emissions Partners S.A. and PJSC «Poltavagaz» signed an Emission Reductions Purchase Agreement relating to the JI project dated 14/07/2011.
10/11/2011 – due to changes in organizational structure, new line-up of the Working Team was approved.

13/12/2011 – obtaining of a Letter of Endorsement from the State Environmental Investment Agency of Ukraine.
23/01/2012 – obtaining of a Letter of Approval from the Federal Office for the Environment of Switzerland (FOEN).
The project has unlimited lifetime as programmes of PETM, monitoring and leak repair are aimed at becoming a part of PJSC «Poltavagaz» operational routine. Reduction of $CO_2$ emissions is claimed for the period of 12 years and 11 months in accordance with modality and procedures of JI Mechanism.

Determination protocol of the project contains CARs and CLs for PDD versions 01, 02 and 03.

# 4 DETERMINATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 35 Corrective Action Requests and 7 Clarification Requests were presented.
The number between brackets at the end of each section correspond to the DVM paragraph.

## 4.1 Project approvals by Parties involved (19-20)

The project “Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz» has been already supported by the Government of Ukraine, namely by the State Environmental Investment Agency of Ukraine, which issued a Letter of Endorsement for the JI Project (No. 3602/23/7 as of 13/12/2011).
After the Determination Report is complete, the Project Design Documents will be submitted to the State Environmental Investment Agency of Ukraine to receive a Letter of Approval.
The project has already received an approval from the Swiss Government, namely the Federal Office for the Environment (FOEN) of Switzerland, which issued the Letter of Approval of JI project No.J294-0485 dated 23/01/2012.

Since the project has not been approved by the Host Party, CAR 01 is under consideration and will be closed after the report is completed (see Appendix A).
The identified areas of concern as to the project approvals by the Parties, project participants responses and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination report (refer to CAR 01).

## 4.2 Authorization of project participants by Parties involved (21)

The participation for each of the legal entities listed as project participants in the PDD will be authorized through written Letters of Approval (from the Government of Switzerland, as the country-investor, and from Ukraine, as the Host Party). See Section 4.1 of this Report.

## 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 (according to the paragraph 11 of the Guidance on criteria of baseline setting and monitoring, version 03).
To set the baseline the JI specific approach based on approved methodology AM0023 "Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities", Version 04.0.0 was applied.
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. The scenario under which the company sticks to the existing system of detection and repair of leaks;
    b. The scenario under which the project is implemented without using the JI Mechanism.
(b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. In this context, the following key factors that affect a baseline are taken into account:

a. The energy sector plays absolute and decisive role in Ukraine as the power industry is a political factor of sovereignty. The Ukrainian economy is one of the most energy demanding economies in the world by primary energy consumption per unit of gross domestic product.

b. Most natural gas transportation and supply companies currently working in Ukraine operate of equipment installed back in the Soviet era.

c. The current practice of detection and elimination of natural gas losses and, correspondingly, methane emissions complies with the current legislation of Ukraine. The legislation permits the loss of natural gas and, correspondingly, methane emissions in the course of natural gas transportation. The standards set only the frequency of inspection of equipment by gas distribution organizations to detect losses of natural gas. The practice of natural gas loss detection at PJSC "Poltavagaz" meets the standards. The control of compliance with norms shall be performed by annual inspections by authorized bodies.

d. The state support in the sphere of natural gas transportation and supply is available in accordance with funds provided by the State Budget of Ukraine for the corresponding year.

e. Ukraine already implements JI projects in the sphere of natural gas transportation and supply “Reduction of methane emissions at flanged, threaded Joints and shut-down devices of OJSC “Kyivgas” equipment”, “Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment”, “Reduction of natural gas emissions at OJSC “Odesagas” gate stations and gas distribution networks”) by selling emission reduction units.

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

The identified areas of concern as to the baseline, project participants responses and Bureau Veritas Certification’s conclusion are described in Appendix A to the Determination report (refer to CAR 17-CAR 25).

## 4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used according to the JI specific approach determined as per clause 2(c) of annex I to the "Guidance on criteria for baseline setting and monitoring", Version 03. 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.

The developer of the project proved that the amount of project anthropogenic emissions is lower than the emissions that would occur in the absence of project activity.
The latest version of the PDD demonstrated that there are several barriers preventing proposed project activity.
Two realistic and plausible alternative scenarios specified in the project were determined:

- Continuation of current situation at the enterprise;

- Implementation of measures provided by the project, without a mechanism established by Article 6 of the Kyoto Protocol to the UN Framework Convention on Climate Change

and compliance of such scenarios with compulsory legislation and regulatory acts was proved.

To demonstrate that the project is not a plausible baseline scenario without a JI project, the following process is applied, which consists of the following steps:

- Barrier analysis: The analysis demonstrates that there are organizational and financial barriers as well as lack of experience and technical knowledge of available qualified personnel at the beginning of the project
- Common practice analysis: Measures similar to activities under this project can be carried out at present only in case of receipt of expected income from the implementation of the mechanism established by Article 6 of the Kyoto Protocol to the UN Framework Convention on Climate Change. Thus, this project is deemed to satisfy the additionality criteria.

Thus, the general conclusion is that project activity meets the criteria of additionality, is not the baseline scenario and is additional. Additionality is demonstrated properly, as a result of the analysis using the selected approach.

The identified areas of concern as to the additionality, project participants responses and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination report (refer to CAR 26, CAR 27, CL 04).

## 4.5 Project boundary (32-33)

The project boundary defined in the PDD, which is according to the specific approach outlined by physical, geographical location of all gas supply system of PJSC "Poltavagaz" (gas supply networks and facilities for gas supply of urban settlements, the system of gas pipelines, GDPs, GDSs, GDIs, pressure regulators, gas supply systems of municipal and industrial enterprises, gas supply of buildings, etc.), encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as:
- Leaks at gas equipment (reducers, valves, filters, etc.) of gas distribution points (cabinet-type gas distribution points);

(ii) Reasonably attributable to the project, such as:
- methane leaks in gas armature (faucets, valves, etc.), threaded and flanged joints, located in gas distribution networks of PJSC "Poltavagaz"

(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of $CO_2$ equivalent, whichever is lower.

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

## 4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the Memorandum of Understanding relating to the JI project between Moston Properties Limited and PJSC «Poltavagaz» was signed, and the starting date is 04/02/2005, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 12 years and 11 months, or 155 months, from 04/02/2005 to 31/12/2017.

The PDD states the length of the crediting period in years and months, which is 12 years and 11 months, or 155 months, and its starting date is 17/02/2005, which is the date when the first project activities at gas pipelines of PJSC "Poltavagaz" were implemented.

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

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

The identified areas of concern as to the crediting period, project participants responses and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination report (refer to CAR 28, CAR 29).

## 4.7 Monitoring plan (35-39)

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

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as reporting forms, the operational structure and management structure of the enterprise, that will be applied when implementing the monitoring plan.

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

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC, as appropriate, among which: methane leak rate for each detected leak ($F_{CH_{4,i}}$), methane concentration in a reservoir ($w_{sampleCH4,i}$), number of hours of equipment operation ($T_i$).

According to Guidance for users of JI PDD forms, version 04, described approach to monitoring clearly and accurately specifies:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once , and that are available already at the stage of the PDD development:

| | |
|---|---|
| i | Serial number of gas equipment of GDPs (CGDPs), flanged or threaded joints, gas fitting of gas pipeline where methane leaks were detected |
| $V_{bag}$ | Reservoir volume, $m^3$ |

(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 PDD development: absent.

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

| | |
|---|---|
| Ti | Number of hours when the equipment at which leak was detected was in operation during the year, h |
| Data | Date of repair (reconstruction) and monitoring, month and year |
| $GWP_{CH4}$ | Global warming potential for methane, $tCO_2e/tCH_4$ |
| $FCH_{4,i}$ | Methane leak rate for each detected leak, $m^3CH_4/h$ |
| $t_i$ | Gas temperature, °C |
| $P_i$ | Gas pressure, MPa |
| $UR_i$ | The uncertainty range for the measurement method applied to leak i, % |
| $w_{sampleCH4,i}$ | Methane concentration in the reservoir, % |
| $\tau_i$ | The time during which methane concentration in reservoir reaches certain level, s |

After the detection and measurement of methane leaks a monitoring programme was developed for all gas equipment of GDPs (CGDPs), shut-off and control valves, flanged and threaded joints of PJSC “Poltavagaz” gas pipelines. Implementation of the programme is a part of the JI project activity. The monitoring covers emissions from newly detected sources of leaks and control of already repaired equipment where gas leaks have been detected before.
Under the JI project the Working Team of PJSC “Poltavagaz” drew up a Registry of gas distribution points and gas fittings of the JI project "Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC “Poltavagaz” (see Supporting Document 1), which includes full information about all GDPs (CGDPs), shut-off and control valves, flanged and threaded joints included into the Project boundary.
All relevant data associated with calculation of methane emission reductions are stored in an electronic database. Each Monitoring Report will contain all necessary information from this database.

Project data and documents in paper and/or electronic form shall be stored till 31/12/2019 pursuant to Orders No. 29/1 dated 07/02/2005 and No. 352 dated 10/11/2011 issued by the management board of PJSC "Poltavagaz"
The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as archiving of data by technical staff and accounting department of the enterprise as well as maintenance engineers.

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

Formulae used for estimation of baseline emissions (for each gas, source, etc.; emissions in t $CO_2$):

When using the leak-proof bag method of leak measurement, methane leaks from one unit of equipment can be calculated in accordance with the following formula:

$\bar{F}_{CH_{4,i}}$ = Vbag * $w_{sampleCH4,i}$ * 3600 / $\tau_i$, where (1)

$\bar{F}_{CH_{4,i}}$ - methane leak rate (volume) through leaky piece of equipment *i* before the repair (replacement), m³/h;
Vbag - volume of a leak-proof bag for measurement, m³;
$w_{sampleCH4,i}$ - methane concentration in a leak sample that is the difference of concentrations at the beginning and at the end of measurement, %;
$\tau_i$ - average time for bag filling for leak *i* before its repair (replacement), seconds.

Methane leak rate (volume) obtained as a result of measurements is adjusted to standard conditions ($P_н$ = 0,1013 MPa, $T_н$ = 273 K) in accordance with the following formula:

$$F_{CH_{4,i,B}} = \frac{\bar{F}_{CH_{4,i}} \cdot 273 \cdot P}{0{,}1013 \cdot (273+t)}$$, where (2)

$F_{CH_{4,i,B}}$ – methane leak rate (volume) for element *i*, adjusted to standard conditions (before the repair, replacement), $m^3$/h;

$\bar{F}_{CH_{4,i}}$ – methane leak rate (volume) through leaky piece of equipment *i* before the repair (replacement), m³/h;
P – gas pressure in the tank, MPa;
*t* – gas temperature in the tank, °C.

Annual baseline methane leaks are calculated in accordance with the following formula:

$Q_{yB}$ = ConvFactor *Σ[ $F_{CH_{4,i,B}}$ *Ti,y * URi]*$GWP_{CH4}$*0.9, where (3)

QyB - baseline methane emissions at gas equipment in period *y* (before its repair, replacement), $tCO_2e$;
ConvFactor - m³ $CH_4$ to t $CH_4$ conversion factor under standard conditions (0 °C and 101.3 kPa). It equals to 0.0007168 t $CH_4$/m³ $CH_4$;
$F_{CH_{4,i,B}}$ – speed (volume) of baseline methane leak for element *i*, adjusted to standard conditions (before the repair, replacement), $m^3/h$;
URi - The uncertainty range for the measurement method applied to leak i, %;
Ti,y - time (in hours) for piece of equipment *i* that operated during the period (monitoring period) *y* before the repair (replacement);
$GWP_{CH4}$ Global Warming Potential for methane (equals to 21 t $CO_2e$/t $CH_4$);
0.9 – factor that accounts for inaccuracy of metering device.

Formulae used for estimation of project emissions (for each gas, source, etc.; emissions in t $CO_2$):

When using the leak-proof bag method of leak measurement, methane leaks from one unit of gas equipment (fittings) after the repair (replacement) can be calculated in accordance with the following formula:

$F^+_{CH4,i}$ = Vbag * $w_{sampleCH4,i}$ * 3600 / $\tau_i$, where (4)

$F^+_{CH4,i}$ - methane leak rate (volume) through leaky piece of equipment *i* after the repair (replacement), m³/h;
Vbag - volume of a leak-proof bag for measurement, m³;
$w_{sampleCH4,i}$ - methane concentration in a leak sample that is the difference of concentrations at the beginning and at the end of measurement, %;
$\tau_i$ – time for bag filling for leak i up to the certain concentration, seconds.

Adjustment of methane leak rate (volume) to standard conditions:
Methane leak rate (volume) obtained as a result of measurements is adjusted to standard conditions ($P_н$ = 0,1013 MPa, $T_н$ = 273 K) in accordance with the following formula:

$$F_{CH_{4,i,P}} = \frac{F^+_{CH_{4,i}} \cdot 273 \cdot P}{0{,}1013 \cdot (273+t)}$$, where (5)

$F_{CH_{4,i,P}}$ – project methane leak rate (volume) (after the repair, replacement) for piece of equipment *i*, adjusted to standard conditions, $m^3/h$;
$F^{+}_{CH4,i}$ - methane leak rate (volume) through leaky piece of equipment *i* after the repair (replacement), m³/h;
P – gas pressure in the tank, MPa;
t – gas temperature in the tank, °C.

Annual project methane leaks (after the repair, replacement) are calculated in accordance with the following formula:

$Q_{yP}$= ConvFactor *Σ[$F_{CH_{4,i,P}}$*Ti,y * URi]*$GWP_{CH4}$*0.9, where (6)

$Q_{yP}$ - methane emissions in period *y* for equipment that was repaired (replaced), t $CO_2e$;
ConvFactor - m³ $CH_4$ to t $CH_4$ conversion factor under standard conditions (0 °C and 101.3 kPa). It equals to 0.0007168 t $CH_4/m^3$ $CH_4$;
$F_{CH_{4,i,P}}$ – speed (volume) of project methane leak for piece of equipment *i*, adjusted to standard conditions (after the repair, replacement), $m^3/h$;
URi - The uncertainty range for the measurement method applied to leak i, % (equals to 95%);
Ti,y - time (in hours) for piece of equipment *i* that operated during the period (monitoring period) *y* after the repair (replacement);
$GWP_{CH4}$ - Global Warming Potential for methane (equals to 21 t $CO_2e/t$ $CH_4$);
0.9 - factor that accounts for inaccuracy of metering device.

Quantity of Emission Reduction Units (ERUs), in tonnes of $CO_2e$, is calculated according to the formula:

ERU = $\sum[Q_{yB} - Q_{yP}]$, where (7)

ERU – emission reduction units, t $CO_2e$;
$Q_{yP}$ – project emissions, t $CO_2e$;
$Q_{yB}$ – baseline emissions, t $CO_2e$.

The monitoring plan presents the quality assurance and control procedures for the monitoring process provided in PDD version 03.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities.

Coordination of activities of all departments and services of PJSC "Poltavagaz" relating to the JI project implementation is done by the Working Team created pursuant to Order No.29/1 of PJSC "Poltavagaz" management board as of 07/02/2005. The new line-up of the Working Team is approved by Order No. 352 of the Chairman of PJSC

"Poltavagaz" Board dated 10/11/2011. The structure of the Working Team is shown in Figure 1.

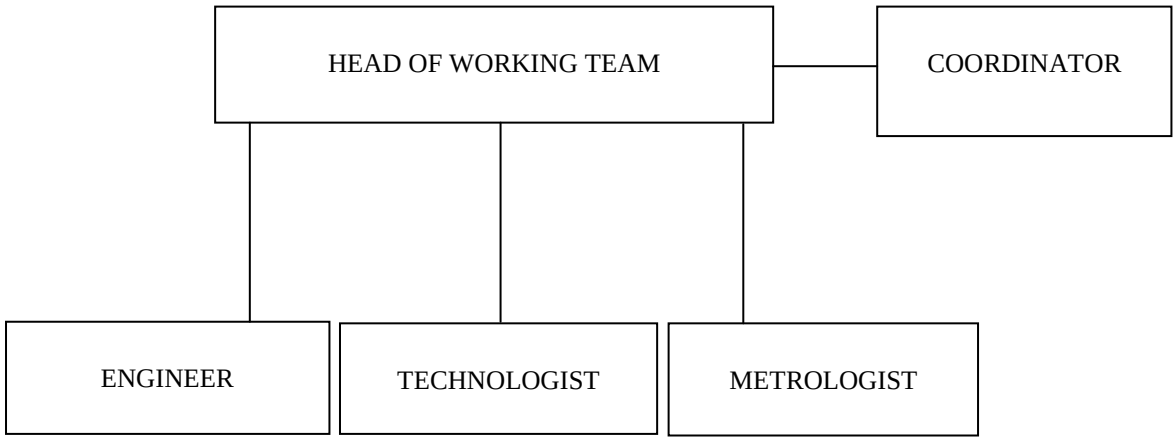


**Figure 1 The structure of the Working Team**

The technologist of PJSC "Poltavagaz" is responsible for collection of all information under the monitoring plan and conduction of all necessary calculations. The engineer is responsible for organization of monitoring measurements of leaks and their repair. On the basis of the information received, Head of the Working Team shall determine the plan of project activities and the amount of resources required. The metrologist shall ensure the availability of verified metering devices and technical support. The coordinator is responsible for storage, archiving and backuping of project information.

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, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

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

The identified areas of concern as to the monitoring plan, project participants responses and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination report (refer to CAR 30 - CAR 34; CL 05, CL 06).

## 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 JI specific approach does not provide for leakage.

There are no pending issues concerning leakage detected during the determination.

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

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

The PDD provides the forecasted estimates of:

(a) Emissions or net removals for the project scenario (within the project boundary), which are 286 713 $tCO_2e$ for 2005-2007, 1 017 148 $tCO_2e$ for 2008-2012, 1 023 975 $tCO_2e$ for 2013-2017;

(b) Leakage, as applicable, which is 0 $tCO_2e$;

(c) Emissions or net removals for the baseline scenario (within the project boundary), which are 1 581 853 $tCO_2e$ for 2005-2007, 5 611 811 $tCO_2e$ for 2008-2012, 5 649 475 $tCO_2e$ for 2013-2017;

(d) Emission reductions or enhancements of net removals adjusted by leakage (based on (a)-(c) above), which are 1 295 140 $tCO_2e$ for 2005-2007, 4 594 663 $tCO_2e$ for 2008-2012, 4 625 500 $tCO_2e$ for 2013-2017.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 17/02/2005 to 31/12/2017, covering the whole crediting period;

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

(d) For each GHG gas, which is $CH_4$;

(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 formulae used for calculating the estimates referred above, are given in Section 4.7. All formulae are consistent throughout the PDD.
For calculating the estimates referred to above, key factors, e.g. the Ukrainian environmental legislation and other national legislation, as well

as key relevant factors such as availability of funds for implementation of the project activities, rates established by the state, modern technology and the possibility of know-how implementation in gas supply sector influencing the baseline emissions or removals and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as documents and archive data of the enterprise, standards and statistical forms, results of periodic inspections of meters are clearly identified, reliable and transparent.

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

The annual average of estimated emission reductions or enhancements of net removals over the crediting period is 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.

Detailed algorithms of calculation and their results are described in Sections D, E and supporting documents to the PDD.

The identified areas of concern as to the estimation of emission reductions, project participants responses and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination report (refer to CAR 35, CAR 36).

## 4.10 Environmental impacts (48)

According to the environmental standards of Ukraine, natural gas emissions into the air are not considered polluting. Therefore no environmental permissions are required for natural gas transportation and supply. The only environmental impact is reduction of natural gas emissions into the atmosphere.

Implementation of this project will increase the safety of operation of gas distribution networks, which, in turn, will reduce the probability of explosions or fires.

No transboundary impacts from the project activity, according to their definition in the text of the "Convention on long-range tansboundary pollution" ratified by Ukraine, will take place.

Project implementation does not provide for any harmful environmental impacts.

The identified areas of concern as to the environmental impacts, project participants responses and Bureau Veritas Certification's conclusion are described in Appendix A to the Determination report (refer to CL 07).

## 4.11 Stakeholder consultation (49)

Consultations were conducted with the specialists of the Institute of General Energy of NAS of Ukraine. No comments from Stakeholders were received. The project activity provides for neither negative impact on the environment nor negative social effect. There were no pending issues concerning local stakeholder comments detected in the course of determination.

## 4.12 Determination regarding small scale projects (50-57)

Not applicable.

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

Not applicable.

## 4.14 Determination regarding programmes of activities (65-73)

Not applicable.

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

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

# 6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz» Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases:

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

Project participants used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides barrier analysis and common practice analysis to determine that the project activity itself is not the baseline scenario.

Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 03 dated 15/02/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

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

# 7 REFERENCES

**Category 1 Documents:**

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

| | |
|---|---|
| /1/ | PDD «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz», version 01 dated 17/02/2005; |
| /2/ | PDD «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz», version 02 dated 14/12/2011; |
| /3/ | PDD «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz», version 03 dated 15/02/2012; |
| /4/ | Supporting Document 1 to the PDD of the JI project «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz», «Registry of gas distribution points, cabinet-type gas distribution points, gas fittings of gas distribution networks of the Joint Implementation Project»; |
| /5/ | Supporting Document 2 to the PDD of the JI project «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz», «Calculation of methane emission reductions on gas equipment of GDPs (CGDPs), gas fittings, flanged and threaded connections of gas distribution networks of PJSC “Poltavagaz” on the basis of initial monitoring measurements»; |
| /6/ | Memorandum of Understanding relating to the JI project between Moston Properties Limited (UK) and PJSC "Poltavagaz" dated 04/02/2005; |
| /7/ | Letter of Endorsement No.3602/23/7 of the JI project «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz» dated 13/12/2011, issued by the State Environmental Investment Agency of Ukraine |
| /8/ | Letter of Approval No.J294-0485 of the JI project «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz» dated 23/01/2012, issued by the Federal Office for the Environment (FOEN) of Switzerland. |

| | |
|---|---|
| /9/ | Guidelines for users of the JI PDD form, version 04, JISC; |
| /10/ | AM0023 «Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities", version 04.0.0 |
| /11/ | Tool for the demonstration and assessment of additionality, Version 06.0.0; |
| /12/ | Kyoto Protocol; |
| /13/ | Marrakech Agreement, JI methods; |
| /14/ | Third national notice of Ukraine on climate change within the Kyoto Protocol; |
| /15/ | Fourth national notice of Ukraine on climate change within the Kyoto Protocol; |
| /16/ | Fifth national notice of Ukraine on climate change within the Kyoto Protocol; |
| /17/ | Decree No.254 of the State Committee on Labor Protection of Ukraine dated 01/10/1997, registered under No.318/2758 with the Ministry of Justice of Ukraine on 15/05/1998; |
| /18/ | Decree No.29/1 of the management of PJSC "Poltavagaz" dated 07/02/2005 on creation of the Working Team; |
| /19/ | Decree No.352 of the Chairman of the Board of PJSC "Poltavagaz" dated 10/11/2011 on new line-up of the Working Team; |
| /20/ | JI Guidelines. Annex to Resolution 9/CDM.1.; |
| /21/ | Determination and verification manual, version 01; |
| /22/ | Guidance on criteria for baseline setting and monitoring, JISC. Version 03. |

**Category 2 Documents:**

Documents provided by CEP Carbon Emissions Partners S.A. that relate directly to the GHG components of the project.

| | |
|---|---|
| /1/ | Registry of gas distribution points, cabinet-type gas distribution points, gas fittings of gas distribution networks of Joint Implementation project «Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC «Poltavagaz» in electronic form |
| /2/ | Manual for Variotec ® 8-EX gas analyser. |
| /3/ | Maintenance ticket No.1 for SOS pr-26-2-010 mechanical stopwatch effective during the warranty period |
| /4/ | Passport L62.832.003 PS of M 67control barometer aneroid. |
| /5/ | Calibration Certificate No.2545/1711 of metering device SOOpr-2b-2-000 stopwatch dated 15/10/2010 |
| /6/ | Calibration Certificate No.3744/10 of metering device M 6 Control barometer-aneroid dated 21/11/2011 |
| /7/ | Calibration Certificate No.84191/2 of metering device Variotec-8EX Gas Indicator dated 15/07/2011 |
| /8/ | Certificate No. 08-0118 of state metrological certification of Variotec-8EX Gas Indicator dated 21/06/2010 |
| /9/ | Certificate No. 08-002 of state metrological certification of SNOOPER mini Leakage Detector dated 03/06/2010 |
| /10/ | Passport No. 37 for TL-2 mercury-in-glass thermometer dated 5/05/2010 |
| /11/ | Passport No. 36 for TL-2 mercury-in-glass thermometer dated 5/05/2010 |
| /12/ | Calibration Certificate No. 14-08/004 of metering device TL-2 mercury-in-glass thermometer dated 03/02/2010 |
| /13/ | Photo of Actaris RBI 3112 pressure controller installed at GDP No.171 at 4 Vatutin St., Poltava |
| /14/ | Photo of Madas filter installed at GDP No. 171 at 4 Vatutin St., Poltava |
| /15/ | Photo of Itron RBE 4012 pressure controller installed at GDP No. 171 at 4 Vatutin St., Poltava |
| /16/ | Photo of Tartarini pressure controller installed at GDP No.172 at 2b Chornovil St., Poltava |
| /17/ | Photo of RDNK 50/1000 pressure controller installed at GDP No.184 at Levanevsky St., Poltava |
| /18/ | Photo of RDH-50N pressure controller installed at GDP No.186 at 81 Lenin St., Poltava |
| /19/ | Photo of FHS-50 filter and KZShS41nzh faucet installed at GDP No. 186 at 81 Lenin St., Poltava |
| /20/ | Photo of PSK-K3V50-n/20 GDP control valve installed at GDP No. 186 at 81 Lenin St., Poltava |
| /21/ | Photo of CGDP No. 28 installed at 1 Kopernyk Ln., Poltava |

| | |
|---|---|
| /22/ | Photo of Itron RBI 2612 pressure controller installed at CGDP No. 28 at 1 Kopernyk Ln., Poltava |
| /23/ | Photo of FHV gas filter installed at CGDP No. 28 at 1 Kopernyk Ln., Poltava |
| /24/ | Photo of CGDP No. 30 installed at 3 Stepovyk Ln., Poltava |
| /25/ | Photo of FHV filter and KZShS41nzh faucet installed at CGDP No. 30 at 3 Stepovyk Ln., Poltava |
| /26/ | Photo of RDNK 400m pressure controller installed at CGDP No. 30 at 3 Stepovyk Ln., Poltava |
| /27/ | Photo of PSK-K3V25-n/20 control valve installed at CGDP No. 30 at 3 Stepovyk Ln., Poltava |
| /28/ | Photo of KZShS41nzh faucet installed at CGDP No. 30 at 3 Stepovyk Ln., Poltava |

**Persons interviewed:**

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

| | Name | Organization | Position |
|---|---|---|---|
| /1/ | Hrynchak R.I. | PJSC «Poltavagaz» | President |
| /2/ | Vysochenko I.P. | PJSC «Poltavagaz» | Chief Engineer, Working Team Leader |
| /3/ | Sydorov G.V. | PJSC «Poltavagaz» | Head of PTD, Working Team Secretary |
| /4/ | Voronov V.O. | PJSC «Poltavagaz» | Lead Engineer, Working Team Technologist |
| /5/ | Kyryndas V.M. | PJSC «Poltavagaz» | Head of SEPGP and GDP, Working Team Engineer |
| /6/ | Bielov E.V. | “CEP” LLC | Consultant of CEP CARBON EMISSIONS PARTNERS S.A. |

# APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

**BUREAU VERITAS CERTIFICATION HOLDING SAS**

**Checklist for determination according to the DETERMINATION AND VERIFICATION MANUAL (Version 01)**

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| **Guidelines for Users of the JI PDD form Section A General description of the project** | | | | |
| **A.1. Title of the project** | | | | |
| A.1 | Is the title of the project presented? | The title of the project is presented: "Reduction of methane emissions on the gas equipment of gas distribution points, gas armature, flanged and threaded joints of gas distribution networks of PJSC "Poltavagaz". | OK | OK |
| A.1 | Is the sectoral scope to which the project pertains presented? | Sectoral scope:<br>Sector 10. Fugitive emissions from fuels (solid, oil and gas). | OK | OK |
| A.1 | Is the current version number of the document presented? | The current version of the document: PDD version 03 dated 15/02/2012. See Section A.1. | OK | OK |
| A.1 | Is the date when the document was created presented? | The date when the document was created: 15/02/2012. | OK | OK |
| **A.2. Description of the project** | | | | |
| A.2 | Is the purpose of the project included with a concise, summarizing explanation (max. | The purpose of the project is reduction of natural gas leaks at gas transportation and gas distribution | OK | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | 1-2 pages) of the:<br>a) Situation existing prior to the starting date of the project<br>b) Baseline scenario and<br>c) Project scenario (expected outcome, including a technical description)? | infrastructure of PJSC «Poltavagaz», which are the result of leaks from gas equipment and fittings. The project initiated by PJSC "Poltavagaz" will result in reduction of GHG emissions into the atmosphere and improvement of environmental situation in the region.<br>Detailed information on the baseline and project scenarios with technical description is given in Sections A.2 and A.4.2. of the PDD. | | |
| A.2 | Is the history of the project (incl. its JI component) briefly summarized? | **CAR 02.** Please provide more detailed information about the history of the project (including its JI component) as well as the documents confirming this information as Supporting ones.<br>**CAR 03.** Please provide information on receiving of the Letter of Endorsement from the State Environmental Investment Agency of Ukraine. | **CAR 02**<br>**CAR 03** | OK<br>OK |
| **A.3. Project participants** | | | | |
| A.3 | Are project participants and Party (ies) involved in the project listed? | Parties involved in the project: PJSC «Poltavagaz» (Ukraine – the Host Party), CEP Carbon Emissions Partners S.A. (Switzerland). | OK | OK |
| A.3 | Is the data of the project participants presented in tabular format? | The data on project participants are given in tabular form. | OK | OK |
| A.3 | Is contact information provided in Annex 1 of the PDD? | Contact information is provided in Annex 1 of the PDD.<br>**CAR 04.** Please provide contact information on the | **CAR 04** | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | | project participant from Switzerland (CEP Carbon Emissions Partners S.A). | | |
| A.3 | Is it indicated, if it is the case, that the Party involved is a host Party? | Ukraine is the Host Party. | OK | OK |
| **A.4 Technical description of the project** | | | | |
| Location of the project | | | | |
| A.4.1.1 | Host Party(ies) | Ukraine is the Host Party. | OK | OK |
| A.4.1.2 | Region/State/Province etc. | Poltava region, Ukraine | OK | OK |
| A.4.1.3 | City/Town/Community etc. | Poltava city, towns and settlements of Poltavskyi, Reshetylivskyi, Velyko-Bohachivskyi, Hlobinskyi, Dykanskyi, Zenkovskyi, Karlivskyi, Kobylyatskyi, Lokhvutskyi, Mashevskyi, Myrhorodskyi, Novo-Sanzharskyi and Chutovskyi districts of Poltava region, Ukraine. | OK | OK |
| A.4.1.4 | Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page). | Information about location is given in Section A.4.1.4 of the PDD.<br>**CAR 05.** Please provide detailed information about facilities included in the project and the details of their physical location. | **CAR 05** | OK |
| **A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project** | | | | |
| A.4.2 | Are the technology (ies) to be employed, or measures, operations or actions to be implemented by the project, including all | PDD Section A.4.2 provides the description of the main stages of the project implementation, the annual project activities schedule, some relevant technical data | **CAR 06**<br>**CAR 07**<br>**CAR 08** | OK<br>OK<br>OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | relevant technical data and the implementation schedule described? | relating to main equipment to be installed as well as project activities to be implemented in the framework of the project.<br>Project design represents the current cutting-edge practice.<br>**CAR 06.** Please provide information on specifications of units used for quantitative measurement of methane leaks at gas distribution networks of PJSC "Poltavagaz".<br>**CAR 07.** The project provides for replacement of old shut-off and control valves with new modern fittings from European manufacturers. Please substantiate the positive changes resulting from such project measure.<br>**CAR 08.** Please provide specifications and information on Variotec ® 8-EX gas analyser.<br>**CAR 09.** Please provide the project implementation schedule with indication of start dates and end dates for each activity and stage.<br>**CAR 10.** The project provides for introduction of sealants for leak repair State Standard 7338-90. Please, give information on such sealants in Section A.4.2. of the PDD.<br>**CL 01.** Please explain and provide evidence of how the fact that the measures implemented under the project activity are not a part of the maintenance program | **CAR 09**<br>**CAR 10**<br>**CAR 11**<br>**CAR 12**<br>**CAR 13**<br>**CL 01**<br>**CL 02**<br>**CL 03** | OK<br>OK<br>OK<br>OK<br>OK<br>OK<br>OK<br>OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | | (accidents, scheduled repairs, etc.) will be guaranteed.<br>**CL 02.** Please provide explanation to Figure 2 in the PDD text in the corresponding section.<br>**CL 03.** Please provide explanation regarding Purposeful Examination and Technical Maintenance (PETM) and provide information on its application by PJSC "Poltavagaz".<br>**CAR 11.** Please provide information on quantitative indicators of the project activitiy for each measure.<br>**CAR 12.** Please explain how the problem related to the difficulty of accounting of the volume of fittings themselves (where measurements are to be performed) is addressed when using the method based on the Calibrated Bag technology described in methodology AM0023.<br>**CAR 13.** Please provide information about the reasons why the proposed measures will not be implemented without the project activity, taking into account national and/or sectoral policies and circumstances. | | |
| **A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances** | | | | |
| A.4.3 | Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page) | The project provides for reduction of natural gas leaks at gas transportation and gas distribution infrastructure of PJSC "Poltavagaz" that are the result of leaky gas | OK | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | | equipment and fittings. According to the baseline scenario, all the equipment, including old units yet capable of operating with lower leak-proofness than it is provided for by the project activity, would be operated for a long time in a usual mode, which makes it impossible to reduce methane emissions. The project implementation will reduce methane leaks, leading to a significant reduction of GHG emissions. | | |
| A.4.3 | Is it provided the estimation of emission reductions over the crediting period? | The estimation of emission reductions over the crediting period is provided in Section A.4.3.1. of the PDD.<br>**CAR 14.** The length of the crediting period indicated in the PDD is 13 years while the calculation is provided for only 8 years. Please make corresponding corrections.<br>**CAR 15.** In Section A.4.1.4 there are incorrect references to Section E and Supporting Documents. Please provide the correct references.<br>**CAR 16.** The length of the crediting period specified in Table 1, Section A.4.3.1, is incorrect. Please make the correction. | **CAR 14**<br>**CAR 15**<br>**CAR 16** | OK<br>OK<br>OK |
| A.4.3 | Is it provided the estimated annual reduction for the chosen crediting period in $tCO_2e$? | The estimated annual emission reductions for the first commitment period in $tCO_2e$ are provided; the estimated annual emission reductions for the period | Pending | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | | before and after the first commitment period within the project are also provided.<br>Reference to **CAR 14**. | | |
| A.4.3 | Are the data from questions above presented in tabular format? | Information on the crediting period, before and after the crediting period is presented in tabular format. See PDD (Version 03) Tables 1, 2, 3, Section A.4.3.1.<br>Reference to **CAR 14**. | Pending | OK |
| **A.4.3.1. Estimated amount of emission reductions over the crediting period** | | | | |
| A.4.3.1 | Is the length of the crediting period Indicated? | The length of the crediting period is indicated in the PDD Section C. | OK | OK |
| A.4.3.1 | Are estimates of total as well as annual and average annual emission reductions in tonnes of $CO_2$ equivalent provided? | Total as well as annual and average annual emission reductions in tonnes of $CO_2$ equivalent are provided in accordance with the calculated values in the tables of Section A of PDD and the Supporting documents. | OK | OK |
| **Project approvals by Parties** | | | | |
| 19 | Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals? | **CAR 01**. The project has an approval from the government of Switzerland as the country-investor, but no approval from the Host Party.<br>To obtain the Letter of Approval the final Determination report must be submitted to the State Environmental Investment Agency of Ukraine; it must include this Determination Protocol and the list of sources of Reference Information. | **CAR 01** | Pending |

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| | | **CAR 01** will be closed after the Letter of Approval is issued by the Host Party. | | |
| 19 | Does the PDD identify at least the host Party as a "Party involved"? | Host Party involved in project is Ukraine. | OK | OK |
| 19 | Has the DFP of the host Party issued a written project approval? | Reference to **CAR 01.** | **CAR 01** | Pending |
| 20 | Are all the written project approvals by Parties involved unconditional? | Reference to **CAR 01.** | **CAR 01** | 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:<br>− A written project approval by a Party involved, explicitly indicating the name of the legal entity? or<br>− Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity? | Party involved 1: Ukraine (the Host Party), legal entity is PJSC «Poltavgaz».<br>Party involved 2: Switzerland, legal entity is CEP Carbon Emissions Partners S.A.<br>The project participants will be authorized in accordance with the relevant project approvals.<br>Pending **CAR 01**. | **CAR 01** | Pending |
| **Baseline setting** | | | | |
| 22 | Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? | The chosen baseline is described in section B.1. of the PDD. A specific JI approach is used for setting the baseline. | **CAR 17** | OK |

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| | − JI specific approach<br>− Approved CDM methodology approach | **CAR 17.** Please indicate in the PDD whether elements of the approved CDM methodologies were used for setting the baseline. | | |
| **JI specific approach only** | | | | |
| 23 | Does the PDD provide a detailed theoretical description in a complete and transparent manner? | The choice of the applicable baseline for the project category is sufficiently justified; detailed theoretical description is provided in section B.1 of the PDD version 03.<br>**CAR 18**. Please include more detailed description of the approach used to set the baseline. | **CAR 18** | OK |
| 23 | Does the PDD provide justification that the baseline is established:<br>(a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?<br>(b) Taking into account relevant national and/or sectoral policies and circumstance?<br>− Are key factors that affect a baseline taken into account?<br>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? | The PDD provides detailed, full and transparent description and justification that the baseline is established by:<br>(a) Identifying plausible future scenarios and choosing the most plausible one. As a result of evaluation of several alternatives the most plausible of them have been identified and will be used as a baseline:<br>- Alternative 1.1: Continuation of existing practice, without the JI project.<br>- Alternative 1.2: The project activities without the use of the Joint Implementation mechanism.<br>(b) Taking into account key factors such as for example technological rules of the sector, Ukrainian environmental legislation and other national legislation, | OK | OK |

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| | (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors?<br>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?<br>(f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate? | and key relevant factors, such as the ability of financing of construction and reconstruction of gas distribution system, tariffs for gas supply, availability of local technologies and methods of the project, skills and experience in implementing similar projects<br>(c) In a transparent manner with regard to the choice of JI approach and assumptions, parameters, data sources and key factors for identifying initial conditions listed in tabular format in Section B.1.<br>(d) Taking into account of uncertainties and using conservative assumptions<br>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure<br>(f) By drawing on the list of standard variables.<br>The baseline is set; the description is given in Section B of the PDD. | | |
| 24 | If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above? | The baseline assumptions of the developed JI specific approach are clearly described in full in Section B.1 of the PDD version 03.<br><br>**CAR 19.** Please add correct description of $GWP_{CH4}$ parameter throughout the text of the PDD. | **CAR 19**<br>**CAR 20**<br>**CAR 21**<br>**CAR 22**<br>**CAR 23** | OK<br>OK<br>OK<br>OK<br>OK |

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| | | **CAR 20.** The value of $F_{CH4,i}$ parameter is incorrect. Please provide correct value for the parameter according to the data source and make corrections of calculations in the Supporting Documents.<br><br>**CAR 21**. Please provide the correct description of $w_{sampleCH4,i}$ parameter in Section D.1 of the PDD.<br><br>**CAR 22**. Please provide the correct description of $UR_i$ parameter in Section i D.1 of the PDD.<br><br>**CAR 23**. Annex 2 must include a summary of key elements. Please add relevant information in Annex 2.<br><br>**CAR 24.** Some designations of parameters and data do not correspond to the list of standard variables presented in Annex B of the "Guidance on criteria for baseline setting and monitoring". Please make corresponding corrections of Section B of the PDD.<br><br>**CAR 25.** Description of $\tau_i$ parameter in Section B.1 of the PDD does not coincide with the description of this parameter in Section D.1 of the PDD. Please make the necessary corrections. | **CAR 24**<br>**CAR 25** | OK<br>OK |
| 25 | If a multi-project emission factor is used, | N/A | OK | OK |

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| | does the PDD provide appropriate justification? | | | |
| **CDM methodology approach only** | | | | |
| **Additionality** | | | | |
| **JI specific approach only** | | | | |
| 28 | Does the PDD indicate which of the following approaches for demonstrating additionality is used?<br>(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<br>(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<br>(c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a | The PDD indicates that the project scenario is not a part of the established baseline scenario. It is also stated that the project will lead to emission reductions.<br><br>**CAR 26.** Please change the section relating to additionality assessment using the latest version of the Tool for the demonstration and assessment of additionality, version 06.0.0. | **CAR 26** | OK |

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| | two-month grace period) or any other method for proving additionality approved by the CDM Executive Board". | | | |
| 29 (a) | Does the PDD provide a justification of the applicability of the approach with a clear and transparent description? | Detailed analysis described in Sections A.4.3, B.1 and B.2, shows that emissions of the baseline scenario are likely to exceed emissions of the project scenario due to the implementation of project activities. | OK | OK |
| 29 (b) | Are additionality proofs provided? | Refer to Section B.2. of the PDD. | OK | OK |
| 29 (c) | Is the additionality demonstrated appropriately as a result? | The fact that the project activity itself is not the baseline scenario is clearly demonstrated in Sections A.2, B.1, B.2 of the PDD.<br><br>**CL 04.** Please specify whether there are any mandatory government programs or policy which provide for methane emission reduction at gas equipment of PJSC "Poltavagaz" gas distribution networks. | **CL 04** | OK |
| 30 | If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool | All explanations, descriptions and analyses are made in accordance with the latest version of the "Tool for the demonstration and assessment of additionality". | OK | OK |

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| | or method? | (Version 06.0.0) | | |
| **Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable** | | | | |
| **Project boundary (applicable except for JI LULUCF projects)** | | | | |
| **JI specific approach only** | | | | |
| 32 (a) | Does the project boundary defined in the PDD encompass all anthropogenic emissions<br>by sources of GHGs that are:<br>(i) Under the control of the project participants?<br>(ii) Reasonably attributable to the project?<br>(iii) Significant? | The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are:<br>(i) Under the control of the project participants, such as:<br>- Leaks at gas equipment (reducers, valves, filters, etc.) of gas distribution points (cabinet-type gas distribution points);<br>(ii) Reasonably attributable to the project, such as:<br>- methane leaks in gas armature (faucets, valves, etc.), threaded and flanged joints, located in gas distribution networks of PJSC "Poltavagaz"<br>(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2000 tonnes of $CO_2$ equivalent, whichever is lower. | | |
| 32 (b) | Is the project boundary defined on the basis of a case-by-case assessment with | Project boundary is defined on the basis of case-by-case assessment of different emission sources. | OK | OK |

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| | regard to the criteria referred to in 32 (a) above? | | | |
| 32 (c) | Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart if it is possible? | The project boundary for the baseline and project scenarios is presented in Figure 4 and are outlined with a dash-line frame in the Section B.3 of the PDD. | OK | OK |
| 32 (d) | Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified? | All gases and sources included are explicitly stated. See Section B of the PDD. | OK | OK |
| **Approved CDM methodology approach only_Paragraph 33_ Not applicable** | | | | |
| **Crediting period** | | | | |
| 34 (a) | Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began? | According to the Guidelines for users of JI PDD form (version 04) the starting date of the project is the date when the implementation or construction or real action of the project begins.<br>The project's starting date is identified and specified in Section C. 1 of the PDD.<br>The starting date of the project is 04/02/2005, which is the date when the Memorandum of Understanding relating to the JI project was signed by Moston | **CAR 27** | OK |

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| | | Properties Limited (UK) and PJSC "Poltavagaz". The Memorandum stipulated that Moston Properties Limited should develop the emission monitoring programme and Project Design Documents for the JI project.<br>**CAR 27.** Date of decision making, specified in Section C.1 does not comply with the date specified in Section A.2. Please make necessary corrections. | | |
| 34 (a) | Is the starting date after 2000? | The starting date of the project is after 2000. | OK | OK |
| 34 (b) | Does the PDD state the expected operational lifetime of the project in years and months? | The expected operational lifetime of the project in years and months is 12 years and 11 months, or 155 months, from February 4, 2005, to December 31, 2007. | OK | OK |
| 34 (c) | Does the PDD state the length of the crediting period in years and months? | The length of the crediting period is stated in Section C.3.<br>**CAR 28.** Please specify crediting period limits and justify them. | **CAR 28** | OK |
| 34 (c) | Is the starting date of the crediting period before or after the date of the first emission reductions or enhancements of net removals generated by the project? | The starting date of the crediting period was the date when the first project activities started at gas pipelines of PJSC "Poltavagaz", which is 17/02/2005. | OK | 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 | Generation of ERUs relates to the first commitment period of 5 years (January 1, 2008 – December 31, 2012). | OK | OK |

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| | extend beyond the operational lifetime of the project? | | | |
| 34 (d) | If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval?<br>Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012? | The PDD states that the prolongation of the crediting period beyond 2012 is subject to approval of the Host Party and estimation of emission reductions or enhancements of net removals is presented separately for those until 2012 and those after 2012 in the relevant sections of the PDD.<br>If after the first commitment period under the Kyoto protocol its validity is prolonged, the crediting period under the project will be prolonged by 5 years or 60 months until December 31, 2017. | OK | OK |
| **Monitoring Plan** | | | | |
| 35 | Does the PDD explicitly indicate which of the following approaches is used?<br>− JI specific approach<br>− Approved CDM methodology approach | The proposed project uses a JI specific approach based on the JI requirements in accordance with paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring, version 03. | OK | OK |
| **JI specific approach only** | | | | |
| 36 (a) | Does the monitoring plan describe:<br>− All relevant factors and key characteristics subject to monitoring?<br>− The period in which they will be monitored? | The monitoring plan specifies all decisive factors for the control and reporting on project performance: quality control (QC) and quality assurance (QA) procedures; operational and management structures that will be applied when implementing the monitoring plan. | OK | OK |

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| | − All critical factors for the control and reporting of project performance? | | | |
| 36 (b) | Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored? | The monitoring plan specifies indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored.<br>Data to be monitored are presented in Section D of the PDD.<br><br>**CL 05.** Please clarify whether the data necessary for determination will be stored after the last transfer of ERUs under the project.<br>**CAR 29.** Please correct data units of monitoring data and parameters in Sections D.1.1.1 and D.1.1.3 of the PDD. | **CL 05**<br>**CAR 29** | OK<br>OK |
| 36 (b) | If default values are used:<br>− Are accuracy and reasonableness carefully balanced in their selection?<br>− Do the default values originate from recognized sources?<br>− Are the default values supported by statistical analyses providing reasonable confidence levels?<br>− Are the default values presented in a | Default values are provided in the table of Annex 3 to the PDD. They originate from recognized sources and are presented in a transparent manner. | OK | OK |

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| | transparent manner? | | | |
| 36 (b) (i) | For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified? | Monitoring plan clearly specifies which values should be chosen and justified. | OK | OK |
| 36 (b) (ii) | For other values,<br>− Does the monitoring plan clearly indicate the precise references from which these values are taken?<br>− Is the conservativeness of the values provided justified? | **CAR 30**. Please, number all formulae in Section D of the PDD.<br>**CAR 31**. Please provide all the values of emission reductions in tonnes of $CO_2$ equivalent in the PDD. | **CAR 30**<br>**CAR 31** | OK<br>OK |
| 36 (b) (iii) | For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable? | Refer to Section D of the PDD.<br>**CAR 32.** Please add information regarding collecting and archiving of data in Section D.1.1. | **CAR 32** | OK |
| 36 (b) (iv) | Are International System Units (IS units) used? | IS units are used for certain parameters. | OK | OK |
| 36 (b) (v) | Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring? | Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases within the project boundary is presented in table D.1.1.3. of the PDD. | OK | OK |
| 36 (b) (v) | Is the use of parameters, coefficients, | The use of parameters, coefficients and variables is | OK | OK |

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| | variables, etc. consistent between the baseline and monitoring plan? | consistent between the baseline and monitoring plan. | | |
| 36 (c) | Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"? | The monitoring plan is established taking into account the latest version of "Guidance on criteria for baseline setting and monitoring". | OK | OK |
| 36 (d) | Does the monitoring plan explicitly and clearly distinguish:<br>(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?<br>(ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not yet available at the stage of determination?<br>(iii) Data and parameters that are monitored throughout the crediting period? | The monitoring plan clearly distinguishes two types of data and parameters. Refer to Section D.1. of the PDD.<br>(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.<br>(ii) Data and parameters that are monitored throughout the crediting period.<br>(iii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not yet available at the stage of determination, such data are absent. | OK | OK |
| 36 (e) | Does the monitoring plan describe the methods employed for data monitoring | In tables of parameters provided in section D.1.1.1. of the PDD the time of monitoring (frequency) and the | OK | OK |

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| | (including its frequency) and recording? | source of data to be used, as well as recording method are indicated for all the monitored parameters and data. | | |
| 36 (f) | Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate? | All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained in the PDD. The description of formulae is provided in Section D.1 of the PDD | OK | OK |
| 36 (f) (i) | Is the underlying rationale for the algorithms/formulae explained? | Refer to section 36 (f) of this table. | OK | OK |
| 36 (f) (ii) | Are consistent variables, equation formats, subscripts etc. used? | Consistent variables, equation formats, etc. are used. | OK | OK |
| 36 (f) (iii) | Are all equations numbered? | See **CAR 30.** | OK | OK |
| 36 (f) (iv) | Are all variables with units indicated defined? | Yes. Refer to Section D of the PDD. | OK | OK |
| 36 (f) (v) | Is the conservativeness of the algorithms/procedures justified? | Yes, algorithms/procedures comply with state norms and are conservative. | OK | OK |
| 36 (f) (v) | To the extent possible, are methods to quantitatively account for uncertainty in key parameters included? | Uncertainty in parameters used is low taking into account the algorithms of data monitoring. | OK | OK |

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| 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? | There is consistency between the elaboration on the baseline scenario and procedure for calculating the baseline emissions in the monitoring plan and in tables. | OK | OK |
| 36 (f) (vii) | Are any parts of the algorithms or formulae that are not self-evident explained? | The formulae used in the PDD are sufficiently described. | OK | OK |
| 36 (f) (vii) | Is it justified that the procedure is consistent with standard technical procedures in the relevant sector? | Monitoring under the project does not require any changes in the existing data accounting and data collection system of PJSC "Poltavagaz". | OK | OK |
| 36 (f) (vii) | Are references provided as necessary? | **CAR 33**. Please add references to corresponding rules and regulatory documents of the Host Party. | **CAR 33** | OK |
| 36 (f) (vii) | Are implicit and explicit key assumptions explained in a transparent manner? | All key assumptions are explained in a transparent manner. | OK | OK |
| 36 (f) (vii) | Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed? | N/A | OK | OK |
| 36 (f) (vii) | Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided? | Meters are subject to a regular calibration according to the quality control procedures and the law of Ukraine “On metrology and metrological activity”.<br>Thus, the issue of uncertainty range and confidence interval is irrelevant for such measurements. | OK | OK |

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| 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?<br><br>Does the monitoring plan provide a reference as to where a detailed description of the standard can be found? | The monitoring plan was set according to national norms and standards. | OK | OK |
| 36 (h) | Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner? | Yes | OK | OK |
| 36 (i) | Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request? | Inspection (calibration) of meters is carried out in accordance with manuals of the manufacturer, approved methodologies on inspection/calibration of meters as well as according to the national standards of Ukraine. | OK | OK |
| 36 (j) | Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities? | Detailed operational and management structures are provided in Section D.3 of the PDD.<br><br>**CL 06.** Please, in section D.4., explain that the monitoring plan was established by CEP Carbon | **CL 06** | OK |

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| | | Emissions Partners S.A. and PJSC "Poltavagaz". | | |
| 36 (k) | Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?<br><br>If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied? | Monitoring under the project does not require any changes in the existing data accounting system and data collection procedure. | OK | OK |
| 36 (l) | Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations? | Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions. | OK | OK |
| 36 (m) | Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project? | Data to be monitored and required for determination will be kept for two years after the last transfer of ERUs under the project till 31/12/2019. | OK | OK |
| 37 | If selected elements or combinations of | Yes, selected elements of approved CDM methodology | OK | OK |

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| | approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above? | are used for setting the baseline scenario. The selected elements and combinations together with additional elements that were additionally developed by the project participants are in line with requirements of paragraph 36 above. | | |
| **Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable** | | | | |
| **Applicable to both JI specific approach and approved CDM methodology approach** | | | | |
| 39 | If the monitoring plan indicates overlapping monitoring periods during the crediting period:<br><br>(a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently?<br>(b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? | Periods will not overlap in the crediting period. | OK | OK |

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| | (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?<br><br>(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** | | | | |
| **Approved CDM methodology approach only_Paragraph 41_Not applicable** | | | | |
| **Estimation of emission reductions or enhancements of net removals** | | | | |
| 42 | Does the PDD indicate which of the following approaches it chooses?<br>(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario<br>(b) Direct assessment of emission reductions | The PDD indicates an approach to assessment of emissions in the baseline scenario and the project scenario.<br>Formulae used for assessment of project emissions are described in the Section D.1.1.2. of the PDD.<br><br>**CAR 34.** Please check the numbering of tables in Section E of the PDD and make corresponding | **CAR 34**<br>**CAR 35** | OK<br>OK |

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| | | corrections.<br>**CAR 35.** Please correct invalid references to Supporting Documents in Section E. | | |
| 43 | If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of:<br>(a) Emissions or net removals for the project scenario (within the project boundary)?<br>(b) Leakage, as applicable?<br>(c) Emissions or net removals for the baseline scenario (within the project boundary)?<br>(d) Emission reductions or enhancements of net removals adjusted by leakage? | PDD provides ex ante estimates of:<br>(a) Emissions in the project scenario (Section E.1)<br>(b) Leakage (Section E.2)<br>(c) Emissions in the baseline scenario (Section E.4)<br>(d) Emission reductions adjusted by leakage (Section E.6). | OK | OK |
| 44 | If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of:<br>(a) Emissions or net removals for the project scenario (within the project boundary)?<br>(b) Leakage, as applicable?<br>(c) Emission reductions or enhancements of net removals adjusted by leakage? | N/A | N/A | N/A |
| 45 | For both approaches in 42 | (a) Estimates in 43 are given on the periodic basis, in | OK | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
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| | (a) Are the estimates in 43 or 44 given:<br>(i) On a periodic basis?<br>(ii) At least from the beginning until the end of the crediting period?<br>(iii) On a source-by-source/sink-by-sink basis?<br>(iv) For each GHG?<br>(v) In tonnes of $CO_2$ equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?<br>(b) Are the formulae used for calculating the estimates in 43 or 44 consistent throughout the PDD?<br>(c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? | tonnes of $CO_2$ equivalent, on a source-by-source basis, before, during and after the crediting period.<br>(b) The formulae used in PDD are consistent.<br>(c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate.<br>(d) Data sources used to calculate the estimates are clearly identified, reliable and transparent.<br>(e) Default emission factors are taken from identified sources.<br>(f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner.<br>(g) Estimates in 43 are consistent throughout the PDD.<br>The annual average of estimated emission reductions are calculated correctly (by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve). | | |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?<br>(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?<br>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?<br>(g) Are the estimates in 43 or 44 consistent throughout the PDD?<br>(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 de facto, does the PDD include an illustrative forecasted emissions or net removals | The baseline level of emissions is determined on a basis of the specific approach with the use of elements of the approved methodology AM0023. PDD clearly provides calculation of the extimated emissions. | OK | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | calculation? | | | |
| **Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable** | | | | |
| **Environmental impacts** | | | | |
| 48 (a) | Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party? | **CL 07.** Please, explain whether it is necessary to carry out environmental impact assesment for such project activity in accordance with the law of Ukraine. | **CL 07** | OK |
| 48 (b) | If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to Accompanying documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party? | References to 48(a) | Pending | OK |
| **Stakeholder consultations** | | | | |
| 49 | If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom | There was consultation with specialists of the Institute of General Energetics under the National Academy of Sciences of Ukraine. Comments of the stakeholders were not received. Activities under the project do not provide for negative influence on the environment or | OK | OK |

| Guidelines for Users of the JI PDD form or DVM Paragraph | Check Item | Initial finding | Project participants' actions review | Final Conclusion |
|---|---|---|---|---|
| | comments on the projects have been received, if any?<br>(b) The nature of the comments?<br><br>(c) A description on whether and how the comments have been addressed? | negative social effect. | | |
| **Determination regarding small-scale projects (additional elements for assessment)** | | | | |
| **Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)** | | | | |
| **Determination regarding programmes of activities (additional/alternative elements for assessment)** | | | | |

**TABLE 2 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICTION REQUESTS**

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| **CAR 01**. The project has an approval from the government of Switzerland as the country-investor, but no approval from the Host Party. | 19 | The project is implemented as a bilateral JI project. The Host country is Ukraine, and the country-buyer is Switzerland.<br>To obtain the Letter of Approval from the Host Party the final Determination report must be submitted to the State Environmental Investment Agency of Ukraine; the report includes this Determination Protocol and the list of sources of Reference Information. | **FAR 01** will be closed upon issuance of the Letter of Approval by the Host Party. |
| **CAR 02.** Please provide more detailed information about the history of the project (including its JI component) as well as the documents confirming this information as Supporting ones. | A.2 | On February 04, 2005, Moston Properties Limited (UK) and PJSC «Poltavagaz» signed the Memorandum of Understanding relating to the JI project. It was also stipulated in the contract that Moston Properties Limited had to develop the emission monitoring programme and JI Project Design Document (PDD).<br>On December 10, 2010, with the consent of PJSC «Poltavagaz», Moston Properties Limited assigned all its rights and obligations under the Memorandum of Understanding relating to the JI project to CEP Carbon Emissions Partners S.A. | Information on project history is provided in Section A.2 of the PDD version 03. The issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| | | (Switzerland); on this basis CEP Carbon Emissions Partners S.A. and PJSC «Poltavagaz» signed the Emission Reductions Purchase Agreement dated July 14, 2011.<br>The course of events which occurred at the beginning of the JI project development at the enterprise is provided in Section A.2 of the PDD. | |
| **CAR 03.** Please provide information on receiving of the Letter of Endorsement from the State Environmental Investment Agency of Ukraine. | A.2 | 13/12/2011 – obtaining of the Letter of Endorsement № 3602/23/7 from the State Environmental Investment Agency of Ukraine | The information is provided, the issue is closed. |
| **CAR 04.** Please provide contact information on the project participant from Switzerland (CEP Carbon Emissions Partners S.A). | A.3 | Contact information on CEP Carbon Emissions Partners S.A. is provided in Annex 1 to the PDD version 03. | The information is verified, the issue is closed. |
| **CAR 05.** Please provide detailed information about facilities included in the project and the details of their physical location. | A.4.1.4 | Project facilities that are included in the project boundary, namely gas distribution networks and their components, are located throughout Poltava region, which is indicated in Section A.2 and A.4.2. of the PDD. The detailed information is provided in Accompanying documents of the PDD. | The information is provided, the issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| **CAR 06.** Please provide information on specifications of units used for quantitative measurement of methane leaks at gas distribution networks of PJSC “Poltavagaz”. | A.4.2 | The necessary information on specifications of units used for quantitative measurement of methane leaks at gas distribution networks of PJSC "Poltavagaz" is provided in Section A.4.2 of the PDD version 03. | The information is provided in Section A.4.2. The issue is closed. |
| **CAR 07.** The project provides for replacement of old shut-off and control valves with new modern fittings from European manufacturers. Please substantiate the positive changes resulting from such project measure. | A.4.2 | Replacement of old shut-off and control valves manufactured in the USSR with new fittings from European manufacturers will result in a reduction of methane leaks. The detailed information is provided in Section A.4.2. of the PDD | The substantiation is provided in Section A.4.2 of the latest version of the PDD. The issue is closed |
| **CAR 08.** Please provide specifications and information on Variotec ® 8-EX gas analyser. | A.4.2 | Specifications and information on Variotec ® 8-EX gas analyzer is provided in Section A.4.2 of the PDD version 03. | The information is provided in the corresponding section. The issue is closed. |
| **CAR 09.** Please provide the project implementation schedule with indication of start dates and end dates for each activity and stage. | A.4.2 | The project implementation schedule with indication of project stages and timeframes is provided in the latest version of the PDD. | The issue is closed, the information is verified. |
| **CAR 10.** The project provides for introduction of sealants for leak repair State Standard 7338-90. Please, give information on such sealants in Section A.4.2. of the PDD. | A.4.2 | Sealants, State Standard 7338-90.<br>Oil-resistant plates are designed for manufacturing of rubber products used to seal fixed joints, prevent friction between metal surfaces, handle single shocks, as well as manufacturing of lining, flooring and | The information is provided, the issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| | | other sealing products.<br>Information on sealants for leak repair (State Standard 7338-90) is provided in Section A.4.2. of the PDD version 03. | |
| **CAR 11.** Please provide information on quantitative indicators of the project activitiy for each measure. | A.4.2 | The project provides for:<br>1) Introduction and implementation of the PETM programme, repair (replacement) of gas equipment: 498 GDPs (CGDPs) and 1009 fittings (February - December 2005).<br>2) Implementation of the PETM programme, repair (replacement) of gas equipment: 998 GDPs (CGDPs) and 2018 fittings (January - December 2006)<br>3) Implementation of the PETM programme, repair (replacement) of gas equipment: 749 GDPs (CGDPs) and 1514 fittings (January - December 2007).<br>4) Implementation of the PETM programme, repair (replacement) of gas equipment: 249 GDPs (CGDPs) and 506 fittings (January - December 2008)<br>5) Continuation of implementation of the PETM programme, | The information is provided, the issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| | | implementation of regular monitoring inspections and measurements at already repaired gas equipment of GDPs (CGDPs) and fittings of gas pipelines, leak repair at already repaired equipment, if such leaks take place (January 2009 - December 2017) | |
| **CAR 12.** Please explain how the problem related to the difficulty of accounting of the volume of fittings themselves (where measurements are to be performed) is addressed when using the method based on the Calibrated Bag technology described in methodology AM0023. | A.4.2 | The problem was solved by manufacturing of a special unit on the basis of a plastic tank of a known volume (0.11 $m^3$), a package, a plastic hose and a manometer. A photo of the unit for measurement of methane leaks is provided in Figure 2 in Section A.4.2 of the PDD. | The information is provided, the issue is closed. |
| **CAR 13.** Please provide information about the reasons why the proposed measures will not be implemented without the project activity, taking into account national and/or sectoral policies and circumstances. | A.4.2 | The common practice in the Ukrainian gas supply sphere is use of old technological schemes, constant wear and tear of equipment, no modernization of gas distribution network facilities and no new technologies implemented, which results in significant methane leaks. Without the JI project, Poltava region would continue to operate all the equipment, including old units still capable of operating and | The explanation is accepted. The issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| | | characterized with lower leak-proofness than the one provided by the project, for a long time. In addition, in the absence of the JI project, there would be no measurement of methane leaks, thier registering and accounting; relevant metering devices would be absent; this would inevitably result in more negative consequences in terms of amount of GHG released into the environment due to methane leaks, and faulty sealing of gas equipment of GDPs (CGDPs) and fittings.<br>The detailed explanation is provided in Sections A and B of the PDD. | |
| **CAR 14.** The length of the crediting period indicated in the PDD is 13 years while the calculation is provided for only 8 years. Please make corresponding corrections. | A.4.3 | Tables 1, 2 and 3 demonstrate estimated amount of emission reductions for the period preceding the first commitment period (2005-2007), over the first commitment period (2008-2012) and for the period following the first commitment period (2013-2017). | Corrections are made, the issue is closed. |
| **CAR 15.** In Section A.4.1.4 there are incorrect references to Section E and Supporting Documents. Please provide the correct references. | A.4.3 | Incorrect references were corrected in Section A.4.1.4 of the PDD version 03. | The issue is closed on the basis of corrections made. |
| **CAR 16.** The length of the crediting period | A.4.3 | The period preceding the first | The issue is closed on the basis of |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| specified in Table 1, Section A.4.3.1, is incorrect. Please make the correction. | | commitment period is 2005-2007. The length of this period is 3 years. Corrections are made. | corrections made. |
| **CAR 17.** Please indicate in the PDD whether elements of the approved CDM methodologies were used for setting the baseline. | 22 | The proposed project uses a JI specific approach based on approved methodology AM0023 «Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities - version 04.0.0». The key information is provided in Section B of the PDD. | The information is provided, the issue is closed. |
| **CAR 18.** Please include more detailed description of the approach used to set the baseline. | 23 | For setting the baseline (measurement and calculation of methane leaks) the proposed project uses a specific approach with application of approved CDM methodology AM0023 version 04.0.0 "Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities" with a modification related to the use of more precise method for methane leak measurement.<br>See Section B.1. | The description of approach is provided. The issue is closed. |
| **CAR 19.** Please add correct description of $GWP_{CH4}$ parameter throughout the text of the PDD. | 24 | $GWP_{CH4}$ is global warming potential for methane, $tCO_2e/tCH_4$. | Corrections are made, the issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| **CAR 20.** The value of $F_{CH4,i}$ parameter is incorrect. Please provide correct value for the parameter according to the data source and make corrections of calculations in the Supporting Documents. | 24 | $F_{CH4,i}$ is methane leak rate for each detected leak, $m^3CH_4/h$. Corrections are made in Supporting documents. | The issue is closed on the basis of corrections made. |
| **CAR 21.** Please provide the correct description of $w_{sampleCH4,i}$ parameter in Section D.1 of the PDD. | 24 | $w_{sampleCH4,i}$ is methane concentration in reservoir, %. | Corrections are made, the issue is closed. |
| **CAR 22.** Please provide the correct description of $UR_i$ parameter in Section i D.1 of the PDD. | 24 | $UR_i$ is the uncertainty factor of the equipment for methane leak measurement, %. | The issue is closed on the basis of corrections made. |
| **CAR 23.** Annex 2 must include a summary of key elements. Please add relevant information in Annex 2. | 24 | Annex 2 to the PDD provides key elements for baseline setting (including their description, data source and measurement units). | The information is verified. The issue is closed. |
| **CAR 24.** Some designations of parameters and data do not correspond to the list of standard variables presented in Annex B of the "Guidance on criteria for baseline setting and monitoring". Please make corresponding corrections of Section B of the PDD. | 24 | Corrections were made in accordance with the list of standard variables presented in Annex B of the "Guidance on criteria for baseline setting and monitoring". The information was added to Annex 2 of the PDD. | The issue is closed on the basis of corrections made. |
| **CAR 25.** Description of $\tau_i$ parameter in Section B.1 of the PDD does not coincide with the description of this parameter in Section D.1 of the PDD. Please make the necessary corrections. | 24 | $\tau_i$ is the time during which methane concentration in reservoir reaches a certain level. Corrections are made in Section B.1 of the PDD. | The issue is closed on the basis of corrections made. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| **CAR 26.** Please change the section relating to additionality assessment using the latest version of the Tool for the demonstration and assessment of additionality, version 06.0.0. | 28 | Section B.2. of the PDD, which describes the additionality of the JI project, was corrected according to the latest version of the "Tool for the demonstration and assessment of additionality", version 06.0.0 | The section is corrected. The issue is closed. |
| **CAR 27.** Date of decision making, specified in Section C.1 does not comply with the date specified in Section A.2. Please make necessary corrections. | 34(a) | On February 04, 2005, Moston Properties Limited (UK) and PJSC «Poltavagaz» signed the Memorandum of Understanding relating to the JI project.<br>The date is stated in Sections A.2 and C.1. | The issue is closed, corrections are made. |
| **CAR 28.** Please specify crediting period limits and justify them. | 34(c) | The starting date of the crediting period is on the date when the first actions under the project took place at gas pipe lines of PJSC "Poltavagaz", which is 17/02/2005.<br>Generation of ERUs relates to the first commitment period of 5 years (January 1, 2008 – December 31, 2012). The PDD states that the prolongation of the crediting period beyond 2012 is subject to approval of the Host Party and estimation of emission reductions of enhancements of net removals is presented separately for those until 2012 and | The limits of the crediting period are provided in Section C of the PDD version 03. The issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| | | those after 2012 in the relevant sections of PDD.<br>If after the first commitment period under the Kyoto protocol its validity is prolonged, the crediting period under the project will be prolonged by 5 years, or 60 months, till December 31, 2017. | |
| **CAR 29.** Please correct data units of monitoring data and parameters in Sections D.1.1.1 and D.1.1.3 of the PDD. | 36(b) | Corrections are made in Sections D.1.1.1 and D.1.1.3 of the PDD. | Corrections are made, the issue is closed. |
| **CAR 30.** Please number all formulae in Section D of the PDD. | 36 (b) (ii) | All the formulae provided in Section D of the PDD version 03 were numbered. | The issue is closed on the basis of corrections made. |
| **CAR 31.** Please provide all the values of emission reductions in tonnes of $CO_2$ equivalent in the PDD. | 36 (b) (ii) | The values for emission reductions were given in tonnes of $CO_2$ equivalent throughout the PDD. | The issue is closed on the basis of corrections made. |
| **CAR 32.** Please add information regarding collecting and archiving of data in Section D.1.1. | 36 (b) (iii) | In Sections D.1.1.1. and D.1.1.3., ways of data collection and the form of archivation are specified. | The information is provided, the issue is closed. |
| **CAR 33.** Please add references to corresponding rules and regulatory documents of the Host Party. | 36 (f) (vii) | • Law of Ukraine No.1264-XII "On environmental protection" dated 25/06/1991<br>• Law of Ukraine No.2707-XII "On atmospheric air protection" dated 16/10/1992<br>• Decree No.254 of the State | The references are verified. The issue is closed. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| | | Labor Protection Committee of Ukraine dated 01/10/1997, registered under No. 318/2758 with the Ministry of Justice of Ukraine on 15/05/1998 | |
| **CAR 34.** Please check the numbering of tables in Section E of the PDD and make corresponding corrections. | 42 | Numbering of tables was corrected in the PDD version 03. | Corrections are made, the issue is closed. |
| **CAR 35.** Please correct invalid references to Supporting Documents in Section E. | 42 | Incorrect references to Accompanying Documents in Section E were corrected. | The issue is closed on the basis of corrections made. |
| **CL 01.** Please explain and provide evidence of how the fact that the measures implemented under the project activity are not a part of the maintenance program (accidents, scheduled repairs, etc.) will be guaranteed. | A.4.2 | Before the start of the project, PJSC «Poltavagaz» only detected methane leaks with the help of detectors according to the Ukrainian Gas Supply System Safety Rules, in order to avoid emergencies and explosions. No measurement of leaks, their registering or accounting were performed, and appropriate metering devices were absent.<br>The detailed explanation is provided in Sections A and B of the PDD version 03. | The issue is closed on the basis of necessary explanations provided. |
| **CL 02.** Please provide explanation to Figure 2 in the PDD text in the corresponding section. | A.4.2 | A unit for quantitative measurement of methane leaks is presented in Figure 2 | The explanations to the figure are provided. The issue is closed. |
| **CL 03.** Please provide explanation regarding Purposeful Examination and Technical | A.4.2 | The project provides for implementation of Purposeful | The explanations are satisfactory. The issue is closed |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| Maintenance (PETM) and provide information on its application by PJSC “Poltavagaz”. | | Examination and Technical Maintenance (PETM), which enables not only detection of leaking areas, but also determination of leak volume (i.e. potential volume of gas leak reduction). This key information is required for substantiation of efficiency of repairs and priority objects, which is important under short financing for repair of all leaks. The information on the use of PETM is provided in Section A.2. of the PDD. | |
| **CL 04.** Please specify whether there are any mandatory government programs or policy which provide for methane emission reduction at gas equipment at gas distribution networks of PJSC “Poltavagaz”. | 29 (c) | There are no programmes or policies to bind PJSC “Poltavagaz” to reduce methane emissions at gas equipment of gas distribution networks; there are no legislative restrictions of the baseline scenario. The detailed information was provided in Section B. | The explanations are satisfactory. The issue is closed |
| **CL 05.** Please clarify whether the data necessary for determination will be stored after the last transfer of ERUs under the project. | 36 (b) | Data to be monitored and required for determination and subsequent verification will be archived and stored at PJSC "Poltavagaz" for two years after the transfer of emission reduction units generated by the project. | The explanation is accepted. The issue is closed. |
| **CL 06.** Please explain in section D.4., that the monitoring plan was established by CEP | 36 (j) | Section D.4. indicates that CEP Carbon Emissions Partners S.A. and | The issue is closed on the basis of corrections made. |

| Draft report clarifications and corrective action requests by determination team | Ref. to checklist question in table 1 | Summary of project participants' responses | Determination team conclusion |
|---|---|---|---|
| Carbon Emissions Partners S.A. and PJSC "Poltavagaz". | | PJSC “Poltavagaz” determined the Monitoring Plan of the project. Contact information on the project participants is provided in Annex 1. | |
| **CL 07.** Please, explain whether it is necessary to carry out environmental impact assesment for such project activity in accordance with the law of Ukraine. | 48 (b) | According to environmental standards of Ukraine, natural gas emissions into the atmosphere are not considered polluting. Therefore, no environmental permissions for natural gas transportation and supply are required. The only environmental impact is reduction of natural gas emissions into the atmosphere.<br>Thus, no environmental impact assessment is required. For more details about environmental impact refer to Section F.1. of the PDD. | The explanation is accepted. The issue is closed. |