



# VERIFICATION REPORT CEP CARBON EMISSIONS PARTNERS S.A.

## VERIFICATION OF THE JI PROJECT

### REDUCTION OF GREENHOUSE GASES EMISSIONS BY GASIFICATION OF VOLYN REGION

First periodic

for the period 01/01/2008 – 31/12/2011

REPORT No. UKRAINE-VER/0829/2012

REVISION No. 02

BUREAU VERITAS CERTIFICATION



VERIFICATION REPORT

|   |  |
|---|--|
| Date of first issue:<br>22/11/2012            | Organizational unit:<br>Bureau Veritas Certification Holding SAS |
| Client:<br>CEP CARBON EMISSIONS PARTNERS S.A. | Client ref.:<br>Fabian Knodel                                    |

**Summary:**  
 Bureau Veritas Certification has made the first periodic verification for the period from January 1, 2008 to December 31, 2011 of the "Reduction of greenhouse gases emissions by gasification of Volyn region" project of CEP CARBON EMISSIONS PARTNERS S.A., located in Volyn region, Ukraine, and applying JI specific approach, 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 (but for the crediting period) 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 verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the monitoring report against 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 verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment that is essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated without material errors and the ERUs issued totalize 2 634 114 tonnes of CO2 equivalent for the monitoring period from 01/01/2008 to 31/12/2011.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring plan, and its associated documents.

|   |                      |
|---|----------------------|
| Report No.:<br>UKRAINE-ver/0829/2012  | Subject Group:<br>JI |
| Project title:<br>Reduction of greenhouse gases emissions by gasification of Volyn region   |                      |
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| Work reviewed by:<br>Ivan Sokolov - Internal Technical Reviewer<br>Vasiliv Kobzar – Technical expert  |                      |
| Work approved by:<br>Ivan Sokolov - Operational Manager   |                      |
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## 1 INTRODUCTION

CEP CARBON EMISSIONS PARTNERS S.A. has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Reduction of greenhouse gases emissions by gasification of Volyn region” (hereafter called “the project”) located in Volyn region, Ukraine.

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

The verification covers the period from January 1, 2008 to December 31, 2011.

### 1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.



### **1.3 Verification Team**

The verification team consists of the following personnel:

Oleg Skoblyk  
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Vladimir Kulish  
Bureau Veritas Certification Team Member, Climate Change Lead Verifier

This verification report was reviewed by:

Ivan Sokolov  
Bureau Veritas Certification, Internal Technical Reviewer

Vasiliy Kobzar  
Bureau Veritas Certification, Technical expert

## **2 METHODOLOGY**

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

In order to ensure transparency, a verification 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 verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

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

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

### **2.1 Review of Documents**

The Monitoring Report (MR) submitted by CEP CARBON EMISSIONS PARTNERS S.A. and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document



(PDD), Approved CDM methodology, Determination Report of the project issued by Bureau Veritas Certification Holding SAS No. UKRAINE-det/0694/2012 version 02 as of 11/10/2012, Guidance on criteria for baseline setting and monitoring, Host party criteria, the Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report for the period from 01/01/2008 to 31/12/2011 version 01 of November 19, 2012 and version 02 of November 26, 2012 and the project as described in the determined PDD.

## 2.2 Follow-up Interviews

On 26/11/2012 Bureau Veritas Certification verification team conducted a visit to the project site (PJSC “Volyngas”) and performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of CEP CARBON EMISSIONS PARTNERS S.A. and PJSC “Volyngas” were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

| Interviewed organization                                | Interview topics  |
|---|---|
| PJSC “Volyngas”   | <ul style="list-style-type: none"> <li>➤ Organizational structure</li> <li>➤ Responsibilities and authorities</li> <li>➤ Roles and responsibilities relating to data collection and processing</li> <li>➤ Equipment installation</li> <li>➤ Data logging archiving and reporting</li> <li>➤ Metering equipment control</li> <li>➤ Metering record keeping system, database</li> <li>➤ IT management</li> <li>➤ Personnel training</li> <li>➤ Quality control procedures and technology</li> <li>➤ Internal audit and inspections</li> </ul> |
| Consultant:<br>CEP CARBON<br>EMISSIONS<br>PARTNERS S.A. | <ul style="list-style-type: none"> <li>➤ Baseline methodology</li> <li>➤ Monitoring plan</li> <li>➤ Monitoring report</li> <li>➤ Deviations from the PDD</li> </ul>   |

## 2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification 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 GHG emission reduction calculation.

If the Verification Team, in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- (a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- (b) Clarification request (CL), requesting the project participants to provide additional information for the Verification Team to assess compliance with the monitoring plan
- (c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

The Verification Team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the 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 VERIFICATION CONCLUSIONS**

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 8 Corrective Action Requests and 3 Clarification Requests.

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



### **3.1 Remaining issues and FARs from previous verifications**

The purpose of this verification is to verify the issues from previous verifications and determination or issues to be verified in the PDD. The Determination Report prepared by Bureau Veritas Certification has determined the following unsolved issues:

#### **CAR 15:**

The Letters of Approval from parties involved are absent.

#### **Response**

The project obtained written approval from Ukraine (the Host country) on 22/11/2012 (Letter of Approval № 3576/23/7, issued by the State Environmental Investment Agency). The project was also approved by Switzerland, the country – buyer of GHG emission reductions (Letter of Approval № J294-0485, issued by the Federal Office for the Environment (FOEN) dated 24/10/2012).

### **3.2 Project approval by Parties involved (90-91)**

The project was approved by the host Party (Ukraine) - the Letter of Approval No. 3576/23/7 dated 22/11/2012 issued by State Environmental Investment Agency of Ukraine. The project was also approved by the party – buyer of the emission reduction units (Switzerland) - Letter of Approval No. J294-0485 dated 24/10/2012 issued by the Federal Office for the Environment FOEN of Switzerland.

The abovementioned written approvals are unconditional.

The identified areas of concern as to the project approval by the parties involved, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 01, CAR 02).

### **3.3 Project implementation (92-93)**

The main purpose of the project is reduction of greenhouse gas emissions by changing the structure of fuel consumption in industrial, utility, administrative and private sectors by replacing solid and liquid fuels with natural gas.

The project provides for the construction and expansion of the gas distribution systems (GDS), which will also improve the energy efficiency





of thermal power generation due to the transition of existing heat-generating systems to natural gas. The project initiated by PJSC “Volyngas” results in the reduction of greenhouse gas (GHG) emissions into the atmosphere and improves the environmental situation in the region.

In general, the project activity is aimed at:

- Ensuring of the natural gas supply to end users by means of the construction and reconstruction of gas distribution networks(gasification);
- Replacement of solid and liquid fuels with natural gas;
- Increase in heat energy consumption efficiency;
- Greenhouse gas emission reductions under the Joint Implementation (JI) Mechanism.

Implementation of project activities started in late 2003, as stated in the determined PDD version 02. Therefore, 01/01/2004 was taken as the starting date of the crediting period.

This Monitoring Report presents emission reductions achieved during the period of 01/01/2008 – 31/12/2011. Status of the project activity implementation complies with the project plan included in the determined PDD version 02.

Project implementation status in the reporting period of 01/01/2008 – 31/12/2011 is provided in Table 2 below.

**Table 2 Project implementation status during the reporting monitoring period from 01/01/2008 to 31/12/2011**

| Measures                                      |            |            |           |
|---|------------|------------|-----------|
| Construction of gas distribution networks, km |            |            |           |
| 2008  | 2009       | 2010       | 2011      |
| 0,5529947                                     | 0,31414985 | 0,29189985 | 0,1374889 |

The starting date of the crediting period has not changed and remains the date when the first emission reductions are expected to be generated, namely: January 1, 2004.

The monitoring system is in place.

Monitoring equipment, such as natural gas meters, meets industry standards of Ukraine. All monitoring equipment is included in the detailed verification (calibration) plan and tested at intervals prescribed by the manufacturers of such equipment.



The impact of the project “Reduction of greenhouse gases emissions by gasification of Volyn region” on the environment during the construction work can be assessed as tolerable. Project facilities are not included in the list of activities and facilities of environmental hazard. Completed analysis of the impact of facilities on the environment, which considers all factors, showed that in the normal technical operational mode they will neither cause any negative processes in the environment of the region, nor lead to any negative social and economic consequences and the risk of accidents and their possible impact is minimized.

As part of procedures undertaken at the request of relevant state services, the company reports on environmental performance on a periodical basis. Environmental department of PJSC “Volyngas” develops quarterly reports in accordance with the Form No.2-TP (air) that is provided to local government statistics.

The project scenario provides for expansion of the territorial gas supply system, which includes construction and reconstruction of the gas distribution networks (GDN) and related equipment. The project provides for modernization of the fuel consumption system by means of transition of heat-generating systems to natural gas and transferring the consumers from centralized to individual heating and hot water supply systems, which, in turn, leads to the use of more efficient and environmentally friendly fossil fuel (natural gas), improvement of the quality of heating and hot water supply services, reduction of thermal energy consumption due to increased efficiency of individual systems in comparison with the centralized ones.

The identified areas of concern as to the project implementation, project participants responses and Bureau Veritas Certification’s conclusions are described in Appendix A to this report (refer to CAR 03, CAR 04).

### **3.4 Compliance of the monitoring plan with the monitoring methodology (94-98)**

The monitoring occurred in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

For calculating the emission reductions, key factors, such as volume of natural gas to be supplied to the consumers, existing tariffs for natural gas transportation, public policy in the field of gas supply, experience in implementing activities provided by the project, current practice that exists in this field in Ukraine, financial costs and background, sectoral reform policy in the field of gas supply and legislation, influencing the baseline emissions and the activity level of the project and the emissions



as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating emission reductions such as appropriately calibrated measuring devices, survey of carbon dioxide emission factors are clearly identified, reliable and transparent.

Carbon dioxide emission factor for natural gas combustion, carbon dioxide emission factor for fossil fuel combustion, default emission factor for methane at technological gas equipment at end consumer's place, default emission factor for methane in the process of natural gas transportation and distribution, reduced GHG emission factor for natural gas transportation to end consumers are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The monitoring periods per component of the project are clearly specified in the monitoring report and do not overlap with those for which verifications were already deemed final in the past.

The identified areas of concern as to the compliance of the monitoring plan with the monitoring methodology, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 05, CAR 06, CL 01).

### **3.5 Revision of monitoring plan (99-100)**

Not applicable.

### **3.6 Data management (101)**

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the monitoring plan provided in the PDD, including the quality control and quality assurance procedures.

The function of the monitoring equipment, including its calibration status, is in order.

According to the current Law "On metrology and metrological activity", all metering equipment in Ukraine shall meet the specified requirements of relevant standards and is subject to periodic calibration. Intercalibration periods are stated in Section B.1. of the MR.

The project complies with the legislative requirements relating to calibration and verification.

The evidence and records used for the monitoring are maintained in a traceable manner.



Data collection and management system is in accordance with the monitoring plan provided in the PDD.

The most objective and cumulative indicator that provides a clear picture of whether emission reduction took place is natural gas consumption. The substitution of fuel oil and coal with natural gas leads to GHG emission reductions. In addition, systems of energy carrier transportation, preparation and combustion show higher efficiency if a switch to natural gas occurs and this happens irrelevant of external factors.

The monitoring procedure provides for the following measures:

1. Collection of information on greenhouse gas emissions within the project boundary during the crediting period.
2. Assessment of the project implementation schedule.
3. Collection of the information on measurement equipment, its calibration.
4. Collection and archiving of information on the impact of project activities on the environment.
5. Data archiving.
6. Organization of personnel training.

Data and parameters subject to periodic monitoring, according to the monitoring plan provided in the PDD version 02, as well as the list of constant values used to calculate emission reductions, are provided in Section B.2.1. of the Monitoring Report, as well as in Annexes 3.1-3.3.

Monitoring of natural gas consumption by legal entities.

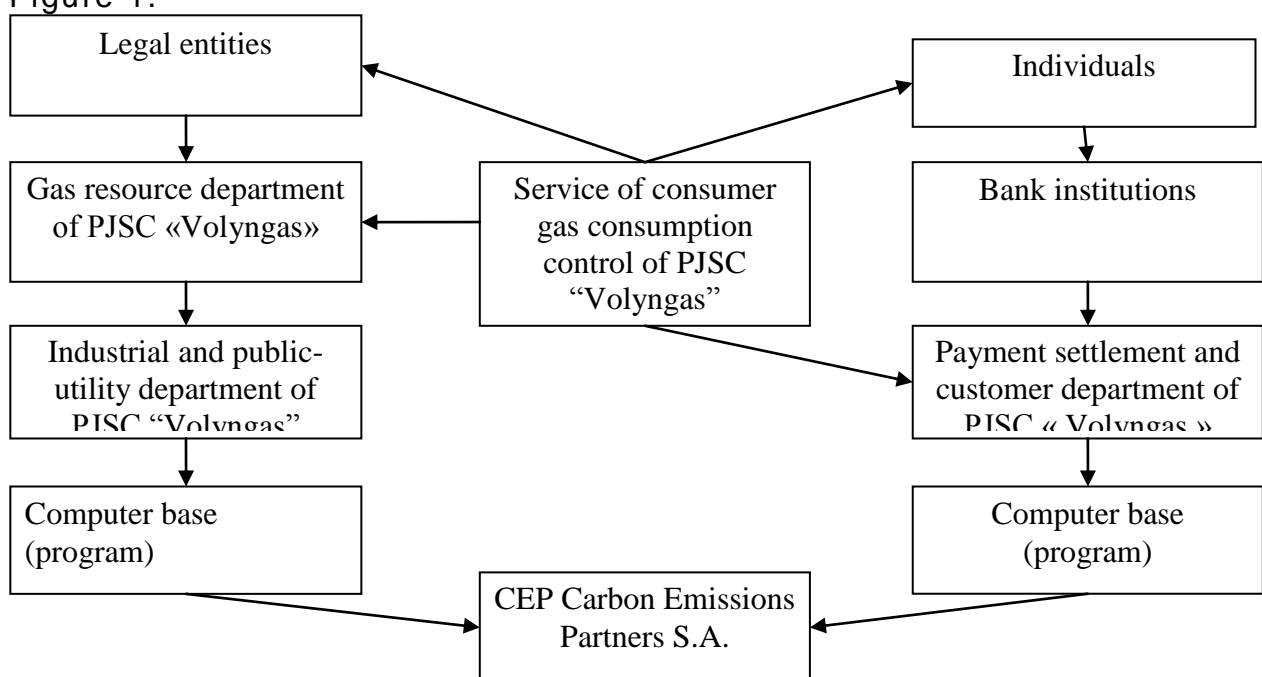
1. Legal entities supply information on gas consumption to the Gas resource department of PJSC "Volyngas" every month.
2. Gas resource department conducts monthly inspections of meters, executes a certificate signed by the enterprise and transfers it to the Industrial and public-utility department of PJSC "Volyngas".
3. Industrial and public-utility department of PJSC "Volyngas" processes information into basic form by program.
4. Indices of gas supply volume processed by program are delivered to the project developer.

Monitoring of natural gas consumption by individuals.

1. Service of consumer gas consumption control conducts monthly inspections of meters, executes a certificate signed by an individual and transfers it to the Consumers service.

2. Bank institutions deliver the information on gas consumption in the form of paid bills to the Payment settlement and customer department of PJSC “Volyngas”.
3. Consumers service processes received information and bases it into program.
4. Indices of gas supply volume processed by program are delivered to the project developer.

Structure of data collection as a part of the project monitoring is shown in Figure 1.



**Figure 1 Structure of monitoring data collection**

All necessary data concerning GHG emission reduction monitoring is archived in paper and/or electronic form and kept till the end of the crediting period and for two years after the latest transaction with emission reduction units.

The Monitoring Report version 02 provides sufficient information on duties assigned, responsibility and authorities concerning implementation and undertaking of monitoring procedures, including data management. The verification team confirms the efficiency of the existing management and operational systems and considers them appropriate for reliable project monitoring.

The identified areas of concern as to the data management, project participants responses and Bureau Veritas Certification’s conclusions are





described in Appendix A to this report (refer to CAR 07, CAR 08, CL 02, CL 03).

### **3.7 Verification regarding programmes of activities (102-110)**

Not applicable.

## **4 VERIFICATION OPINION**

Bureau Veritas Certification has performed the first periodic verification for the period from January 1, 2008 to December 31, 2011 of the “Reduction of greenhouse gases emissions by gasification of Volyn region” project in Ukraine, which applies JI specific approach. The verification 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 verification consisted of the following three phases: i) desk review of the monitoring report against 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 verification report and opinion.

PJSC “Volyngas” management is responsible for the preparation of data which serve as the basis for estimation of GHG emission reductions. CEP CARBON EMISSIONS PARTNERS S.A. provides PJSC “Volyngas” with consultative support in the issues relating to organization of data collection and is responsible for developing the monitoring report based on the Project Monitoring Plan included in the final PDD version 02.

Bureau Veritas Certification verified the Project Monitoring Report version 02 for the reporting period from 01/01/2008 to 31/12/2011 as indicated below. Bureau Veritas Certification confirms that the project is implemented as per approved PDD version. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Emission reductions achieved by the project for the period from 01/01/2008 to 31/12/2011 do not differ from the amount predicted for the same period in the determined PDD. This is explained by the fact that at the time of the PDD development all data were available for accurate calculation of GHG emission reductions of the project.

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the




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project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 01/01/2008 to 31/12/2011

In the period from 01/01/2008 to 31/12/2008

|                     |   |
|---------------------|---|
| Baseline emissions  | : 1 707 496 tonnes of CO <sub>2</sub> equivalent. |
| Project emissions   | : 919 549 tonnes of CO <sub>2</sub> equivalent.   |
| Leakage             | : 128 518 tonnes of CO <sub>2</sub> equivalent.   |
| Emission Reductions | : 659 429 tonnes of CO <sub>2</sub> equivalent.   |

In the period from 01/01/2009 to 31/12/2009

|                     |   |
|---------------------|---|
| Baseline emissions  | : 1 629 082 tonnes of CO <sub>2</sub> equivalent. |
| Project emissions   | : 877 174 tonnes of CO <sub>2</sub> equivalent.   |
| Leakage             | : 122 088 tonnes of CO <sub>2</sub> equivalent.   |
| Emission Reductions | : 629 820 tonnes of CO <sub>2</sub> equivalent.   |

In the period from 01/01/2010 to 31/12/2010

|                     |   |
|---------------------|---|
| Baseline emissions  | : 1 779 606 tonnes of CO <sub>2</sub> equivalent. |
| Project emissions   | : 956 885 tonnes of CO <sub>2</sub> equivalent.   |
| Leakage             | : 129 370 tonnes of CO <sub>2</sub> equivalent.   |
| Emission Reductions | : 693 351 tonnes of CO <sub>2</sub> equivalent.   |

In the period from 01/01/2011 to 31/12/2011

|                     |   |
|---------------------|---|
| Baseline emissions  | : 1 683 410 tonnes of CO <sub>2</sub> equivalent. |
| Project emissions   | : 905 502 tonnes of CO <sub>2</sub> equivalent.   |
| Leakage             | : 126 394 tonnes of CO <sub>2</sub> equivalent.   |
| Emission Reductions | : 651 514 tonnes of CO <sub>2</sub> equivalent.   |

Total in the period from 01/01/2008 to 31/12/2011

|                     |   |
|---------------------|---|
| Baseline emissions  | : 6 799 594 tonnes of CO <sub>2</sub> equivalent. |
| Project emissions   | : 3 659 110 tonnes of CO <sub>2</sub> equivalent. |
| Leakage             | : 506 370 tonnes of CO <sub>2</sub> equivalent.   |
| Emission Reductions | : 2 634 114 tonnes of CO <sub>2</sub> equivalent. |



## 5 REFERENCES

### Category 1 Documents:

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

|      |  |
|------|--|
| /1/  | Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Volyn region" for the period from 01/01/2008 to 31/12/2011 version 01 dated 19/11/2012                               |
| /2/  | Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Volyn region" for the period from 01/01/2008 to 31/12/2011 version 02 dated 26/11/2012                               |
| /3/  | Annex 1. Monitoring Parameters for the period of 01/01/2008 - 31/12/2011   |
| /4/  | Annex 2. Technical registry of gas networks (Excel spreadsheet)  |
| /5/  | Annex 3.1. Calculation of GHG emission reductions under the project "Reduction of greenhouse gases emissions by gasification of Volyn region" (Excel spreadsheet)  |
| /6/  | Annex 3.2. Calculation of GHG emission reductions under the project "Reduction of greenhouse gases emissions by gasification of Volyn region" (Excel spreadsheet)  |
| /7/  | Annex 3.3. Calculation of GHG emission reductions under the project "Reduction of greenhouse gases emissions by gasification of Volyn region" (Excel spreadsheet)  |
| /8/  | Project Design Document of the project "Reduction of greenhouse gases emissions by gasification of Volyn region", version 02 dated 09/10/2012  |
| /9/  | Determination Report of the project "Reduction of greenhouse gases emissions by gasification of Volyn region" No. UKRAINE-det/0694/2012 version 02 as of 11/10/2012 issued by Bureau Veritas Certification           |
| /10/ | Letter of Approval of the Joint Implementation project "Reduction of greenhouse gases emissions by gasification of Volyn region" #3576/23/7 of 22/11/2012 issued by State Environmental Investment Agency of Ukraine |
| /11/ | Letter of Approval of the JI project "Reduction of greenhouse gases emissions by gasification of Volyn region" # J294-0485 issued by the Federal Office for the Environment of Switzerland dated 24/10/2012          |

### Category 2 Documents:

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



## VERIFICATION REPORT

|      |   |
|------|---|
| /1/  | Certificate of acceptance of completed construction of gas supply into operation dated 27/10/2008 |
| /2/  | Certificate of acceptance of completed construction of gas supply into operation dated 30/10/2008 |
| /3/  | Certificate of acceptance of completed construction of gas supply into operation dated 30/09/2008 |
| /4/  | Certificate of acceptance of completed construction of gas supply into operation dated 28/11/2008 |
| /5/  | Certificate of acceptance of completed construction of gas supply into operation dated 10/10/2008 |
| /6/  | Certificate of acceptance of completed construction of gas supply into operation dated 30/07/2008 |
| /7/  | Certificate of acceptance of completed construction of gas supply into operation dated 16/09/2009 |
| /8/  | Verification schedule of measuring equipment  |
| /9/  | Certificate of acceptance of completed construction of gas supply into operation dated 30/06/2011 |
| /10/ | Certificate of absence of 2 TP Form   |
| /11/ | Photo of gas pipelines of low pressure  |
| /12/ | Photo of gas pipelines of medium pressure   |
| /13/ | Photo of gas pipelines of high pressure   |
| /14/ | Photo of software on gas pipelines status   |
| /15/ | Photo GDPs  |

**Persons interviewed:**

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

|     | <b>Name</b>       | <b>Organization</b> | <b>Position</b>   |
|-----|-------------------|---------------------|---|
| /1/ | Haliant S.R.      | PJSC «Volyngas»     | First Deputy Head of the Management Board                           |
| /2/ | Denysiuk V.S.     | PJSC «Volyngas»     | Engineer of production and technical department                     |
| /3/ | Tkachuk M.H.      | PJSC «Volyngas»     | Head of gas supply system operation and development department      |
| /4/ | Ostrovetskyi A.O. | PJSC «Volyngas»     | Engineer of production and technical department of the 2nd category |
| /5/ | Sterniichuk A.V.  | PJSC «Volyngas»     | Head of metrology and standardization department                    |



|     |              |           |   |
|-----|--------------|-----------|---|
| /6/ | Pohosov O.H. | LLC "CEP" | CEP CARBON EMISSIONS PARTNERS S.A. Consultant |
|-----|--------------|-----------|---|





## VERIFICATION REPORT

## APPENDIX A: PROJECT VERIFICATION PROTOCOL

## BUREAU VERITAS CERTIFICATION HOLDING SAS

## VERIFICATION PROTOCOL

**Table 1. Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)**

| DVM Paragraph                                | Check Item  | Initial finding  | Draft Conclusion               | Final Conclusion |
|--|---|--|--------------------------------|------------------|
| <b>Project approvals by Parties involved</b> |   |  |                                |                  |
| 90   | Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest? | The project has been approved by both the Host party (Ukraine) and the other Party involved (Switzerland). The Letters of Approval were issued by NFPs of the Parties involved. Two Letters of Approval were available at the beginning of the first verification of the project.<br><b>CAR 01.</b> The date when The Letters of Approval was issued by the Host party (Ukraine) that is stated in Section A.2 is incorrect. Please, make necessary corrections.<br><b>CAR 02.</b> Please, provide information on the number of the Letter of Approval from Switzerland. | <b>CAR 01</b><br><b>CAR 02</b> | OK<br>OK         |
| 91   | Are all the written project approvals by Parties involved unconditional?  | Yes, all the written project approvals by Parties involved are unconditional.  | OK                             | OK               |
| <b>Project implementation</b>                |   |  |                                |                  |
| 92   | Has the project been implemented in   | Yes, the project has been implemented in   | <b>CAR 03</b>                  | OK               |



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| DVM Paragraph                          | Check Item   | Initial finding  | Draft Conclusion | Final Conclusion |
|--|--|--|------------------|------------------|
|  | accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?   | accordance with the PDD, which is listed on the UNFCCC JI website.<br><b>CAR 03.</b> The monitoring period is incorrect in Section A.6. of the MR.<br><b>CAR 04.</b> Please, state the sectoral scope in the MR.   | <b>CAR 04</b>    | OK               |
| 93                                     | What is the status of operation of the project during the monitoring period?   | Implementation of the project activities started in late 2003, as stated in the determined PDD version 02. Thus, 01/01/2004 is the starting date of the crediting period.<br>Project implementation status and project milestones in the reporting period of 01/01/2008 – 31/12/2011 are provided in in Section A.6. of the MR version 02 and Annex 2.<br>In 2008-2011 PE-80, PE-100 polyethylene pipes and steel pipes that conform to SSTU 10704-91 with reinforced bituminous mastic sealing under SSTU B.V.2.5.-29:2006 were used in construction. | OK               | OK               |
| <b>Compliance with monitoring plan</b> |  |  |                  |                  |
| 94                                     | Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website? | There aren't any changes in or deviations from the registered PDD.   | OK               | OK               |
| 95 (a)                                 | For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) of the DVM, influencing the baseline                  | Yes, all relevant key factors were taken into account, as appropriate.   | OK               | OK               |



## VERIFICATION REPORT

| DVM Paragraph | Check Item   | Initial finding  | Draft Conclusion  | Final Conclusion              |
|---------------|--|--|---|-------------------------------|
|               | emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?   |  |   |                               |
| 95 (b)        | Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?  | <p>Data sources used for calculating emission reductions or enhancements of net removals are clearly identified, reliable and transparent.</p> <p><b>CAR 05.</b> The national inventory report of anthropogenic greenhouse gas emissions by sources and removals by sinks in Ukraine for 1990-2009 is stated as the data source for parameters in Tables 4 and 5 of the MR. But the Inventory for 1990-2010 shall be used.</p> <p><b>CAR 06.</b> An incorrect reference to supporting document is provided after Table 5.</p> <p><b>CL 01.</b> Please, provide a reference to the Guidance on criteria for baseline setting and monitoring in Section B of the MR.</p> | <p><b>CAR 05</b></p> <p><b>CAR 06</b></p> <p><b>CL 01</b></p> | <p>OK</p> <p>OK</p> <p>OK</p> |
| 95 (c)        | Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? | Carbon dioxide emission factor for natural gas combustion, carbon dioxide emission factor for fossil fuel combustion, default emission factor for methane at technological gas equipment at end consumer's place, default emission factor for methane in the process of natural gas transportation and distribution, reduced GHG emission factor for natural gas transportation to end consumers are selected by carefully balancing accuracy and reasonableness,  | OK  | OK                            |



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| DVM Paragraph                                     | Check Item  | Initial finding   | Draft Conclusion | Final Conclusion |
|---|---|---|------------------|------------------|
|   |   | and appropriately justified of the choice.  |                  |                  |
| 95 (d)  | Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?   | Calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner. | OK               | OK               |
| <b>Applicable to JI SSC projects only</b>         |   |   |                  |                  |
| 96  | Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?<br>If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined? | Not applicable  | Not applicable   | Not applicable   |
| <b>Applicable to bundled JI SSC projects only</b> |   |   |                  |                  |
| 97 (a)  | Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?  | Not applicable  | Not applicable   | Not applicable   |
| 97 (b)  | If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?  | Not applicable  | Not applicable   | Not applicable   |
| 98  | If the monitoring is based on a monitoring plan that provides for   | Not applicable  | Not applicable   | Not applicable   |



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| DVM Paragraph   | Check Item   | Initial finding  | Draft Conclusion                               | Final Conclusion |
|---|--|--|--|------------------|
|   | overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report?<br>Do the monitoring periods not overlap with those for which verifications were already deemed final in the past? |  |  |                  |
| <b>Revision of monitoring plan</b>  |  |  |  |                  |
| <b>Applicable only if monitoring plan is revised by project participant</b> |  |  |  |                  |
| 99 (a)  | Did the project participants provide an appropriate justification for the proposed revision?   | Not applicable.  | Not applicable                                 | Not applicable   |
| 99 (b)  | Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?  | Not applicable   | Not applicable                                 | Not applicable   |
| <b>Data management</b>  |  |  |  |                  |
| 101 (a)   | Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?  | The implementation of data collection procedures, including the quality control and quality assurance procedures, is in accordance with the monitoring plan.<br><b>CAR 07.</b> The monitoring period is incorrect in Section B.3.<br><b>CAR 08.</b> The incorrect information about another project is provided in Section C.3. of the MR. | <b>CAR 07</b><br><b>CAR 08</b><br><b>CL 02</b> | OK<br>OK<br>OK   |





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| DVM Paragraph   | Check Item   | Initial finding  | Draft Conclusion | Final Conclusion |
|---|--|--|------------------|------------------|
|   |  | <b>CL 02.</b> Please, provide a reference to law of Ukraine "On metrology and metrological activity".  |                  |                  |
| 101 (b)   | Is the function of the monitoring equipment, including its calibration status, is in order?          | Routine repair of gas networks is carried out once a year; maintenance - once every six months. Repaired gas equipment is regularly examined to ensure that it works properly and is not a source of gas leaks. Means of metering equipment used for monitoring of the project activity are subject to periodic state verification.                      | OK               | OK               |
| 101 (c)   | Are the evidence and records used for the monitoring maintained in a traceable manner?               | The evidences and records used for the monitoring maintained are in a traceable manner.  | OK               | OK               |
| 101 (d)   | Is the data collection and management system for the project in accordance with the monitoring plan? | The data collection and management system for the project is in accordance with the monitoring plan. The verification team confirms the effectiveness of the existing management and operating systems and considers them suitable for reliable monitoring of the project.<br><b>CL 03.</b> Please, check the numbering of Tables and Figures in the MR. | <b>CL 03</b>     | OK               |
| <b>Verification regarding programs of activities (additional elements for assessment)</b> |  |  |                  |                  |
| 102   | Is any JPA that has not been added to the JI PoA not verified?                                       | Not applicable   | Not applicable   | Not applicable   |
| 103   | Is the verification based on the monitoring reports of all JPAs to be verified?                      | Not applicable   | Not applicable   | Not applicable   |
| 103   | Does the verification ensure the   | Not applicable   | Not              | Not              |



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| DVM Paragraph                                   | Check Item   | Initial finding | Draft Conclusion | Final Conclusion |
|---|--|-----------------|------------------|------------------|
|   | accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?  |                 | applicable       | applicable       |
| 104   | Does the monitoring period not overlap with previous monitoring periods?   | Not applicable  | Not applicable   | Not applicable   |
| 105   | If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?  | Not applicable  | Not applicable   | Not applicable   |
| <b>Applicable to sample-based approach only</b> |  |                 |                  |                  |
| 106   | Does the sampling plan prepared by the AIE:<br>(a) Describe its sample selection, taking into account that:<br>(i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as:<br>- The types of JPAs;<br>- The complexity of the applicable technologies and/or measures used;<br>- The geographical location of each | Not applicable  | Not applicable   | Not applicable   |



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| DVM Paragraph | Check Item   | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|--|-----------------|------------------|------------------|
|               | JPA;<br><ul style="list-style-type: none"> <li>- The amounts of expected emission reductions of the JPAs being verified;</li> <li>- The number of JPAs for which emission reductions are being verified;</li> <li>- The length of monitoring periods of the JPAs being verified; and</li> <li>- The samples selected for prior verifications, if any?</li> </ul> |                 |                  |                  |
| 107           | Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?  | Not applicable  | Not applicable   | Not applicable   |
| 108           | Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?          | Not applicable  | Not applicable   | Not applicable   |
| 109           | Is the sampling plan available for submission to the secretariat for the JISC's ex ante assessment? (Optional)   | Not applicable  | Not applicable   | Not applicable   |
| 110           | If the AIE learns of a fraudulently  | Not applicable  | Not              | Not              |



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| DVM Paragraph | Check Item  | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|---|-----------------|------------------|------------------|
|               | included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing? |                 | applicable       | applicable       |



## VERIFICATION REPORT

**Table 2. Resolution of Corrective Action and Clarification Requests**

| Draft report clarifications and corrective action requests by verification team   | Ref. to checklist question in table 1 | Summary of project participant response  | Verification team conclusion  |
|---|---------------------------------------|--|---|
| <b>CAR 01.</b> The date when The Letters of Approval was issued by the Host party (Ukraine) that is stated in Section A.2 is incorrect. Please, make necessary corrections.       | 90                                    | The project obtained written approval from Ukraine (the Host country) on 22/11/2012 (Letter of Approval № 3576/23/7, issued by the State Environmental Investment Agency).                               | CAR 01 is closed as necessary corrections were made in the MR version 02. |
| <b>CAR 02.</b> Please, provide information on the number of the Letter of Approval from Switzerland.  | 90                                    | The project was also approved by Switzerland, the country – buyer of GHG emission reductions (Letter of Approval № J294-0485, issued by the Federal Office for the Environment (FOEN) dated 24/10/2012). | CAR 02 is closed as necessary data were provided in the MR version 02     |
| <b>CAR 03.</b> The monitoring period is incorrect in Section A.6. of the MR.  | 92                                    | This monitoring report provides information on emission reductions achieved in the monitoring period 01/01/2008-31/12/2011   | CAR 03 is closed as necessary changes were made.                          |
| <b>CAR 04.</b> Please, state the sectoral scope in the MR.  | 92                                    | Sectoral scope - 3 “Energy demand”   | CAR 04 is closed as necessary data were provided.                         |
| <b>CAR 05.</b> The national inventory report of anthropogenic greenhouse gas emissions by sources and removals by sinks in Ukraine for 1990-2009 is stated as the data source for | 95(b)                                 | The national inventory report of anthropogenic greenhouse gas emissions by sources and removals by sinks in Ukraine for 1990-2010 was used to  | CAR 05 is closed as necessary corrections were made.                      |



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|   |         |  |  |
|---|---------|--|--|
| parameters in Tables 4 and 5 of the MR. But the Inventory for 1990-2010 shall be used.  |         | determine certain parameters. Refer to the MR version 02.  |  |
| <b>CAR 06.</b> An incorrect reference to supporting document is provided after Table 5.   | 95(b)   | Yearly parameter values used to calculate GHG emissions for the project and the baseline scenarios are shown in Annex 3.1-3.3.: Calculation of GHG emission reductions under the project "Reduction of greenhouse gases emissions by gasification of Volyn region" | CAR 06 is closed as correct reference was provided.  |
| <b>CAR 07.</b> The monitoring period is incorrect in Section B.3.   | 101 (a) | Monitoring period:<br>01/01/2008 – 31/12/2011  | CAR 07 is closed as necessary corrections were made. |
| <b>CAR 08.</b> The incorrect information about another project is provided in Section C.3. of the MR.                             | 101 (a) | Incorrect information is deleted   | CAR 08 is closed as necessary corrections were made. |
| <b>CL 01.</b> Please, provide a reference to the Guidance on criteria for baseline setting and monitoring in Section B of the MR. | 95 (b)  | Relevant reference was provided in the MR version 02.  | CL 01 is closed as necessary reference was provided. |
| <b>CL 02.</b> Please, provide a reference to law of Ukraine "On metrology and metrological activity".                             | 101 (a) | Relevant reference was provided in the MR version 02.  | CL 02 is closed as necessary reference was provided. |
| <b>CL 03.</b> Please, check the numbering of Tables and Figures in the MR.  | 101 (d) | Relevant corrections were made in the MR version 02.   | CL 03 is closed as necessary changes were made.      |