



VERIFICATION REPORT VEMA S.A.

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

First periodic for the period 01/01/2008 – 30/06/2011

REPORT No. UKRAINE-VER/0350/2011

REVISION No. 02

BUREAU VERITAS CERTIFICATION



VERIFICATION REPORT

Date of first issue: 12/09/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: VEMA S.A.	Client ref.: Fabian Knodel

Summary:
Bureau Veritas Certification has made the first periodic verification for the period from 01 January 2008 to 30 June 2011 of the "Reduction of greenhouse gases emissions by gasification of Odesa region" project of VEMA S.A., located in Odesa 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 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 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 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. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs totalize 3617064 tons of CO₂eq for the monitoring period from 01/01/2008 to 30/06/2011 (979869 tons of CO₂eq for the period 01/01/2008-31/12/2008, 986935 tons of CO₂eq for the period 01/01/2009-31/12/2009, 1074768 tons of CO₂eq for the period 01/01/2010-31/12/2010 and 575492 tons of CO₂eq for the period 01/01/2011-30/06/2011).

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

Report No.: UKRAINE-ver/0350/2011	Subject Group: JI
Project title: Reduction of greenhouse gases emissions by gasification of Odesa region	
Work carried out by: Team Leader, Lead Verifier: Igor Kachan Team Member, Lead Verifier: Victoria Legka Team Member, Technical Specialist: Oleksandr Kuzmenko	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer	
Work approved by: Flavio Gomes – Operational Manager	
Date of this revision: 15/09/2011	Rev. No.: 02
Number of pages: 40	

[Handwritten signatures and stamps]
Bureau Veritas Certification Holding SAS

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Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon Dioxide
DVM	Determination and Verification Manual
ERU	Emission reduction unit
FAR	Forward Action Request
GHG	Green House Gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MP	Monitoring Plan
MR	Monitoring Report
DFP	Designated Focal Point
QA/QC	Quality Assurance/Quality Control
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change



1 INTRODUCTION

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

This report summarizes the findings of the 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 1st January 2008 to 30th June 2011.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity (AIE) 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

Verification scope is defined as an independent and objective review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions. The verification is based on the submitted monitoring report, the determined project design document including the project’s baseline study, revised monitoring plan 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:

Igor Kachan

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Victoria Legka

Bureau Veritas Certification Team Member, Climate Change Lead Verifier

Oleksandr Kuzmenko

Bureau Veritas Certification Team Member, Technical Specialist

This verification report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal Technical Reviewer

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 VEMA S.A. and additional background documents related to the project design, baseline, and monitoring plan, i.e. country Law, Project Design Document (PDD),



Guidance on criteria for baseline setting and monitoring, Host party criteria, 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 version 01 of 11 August 2011 and version 02 of 07 September 2011, and project as described in the determined PDD.

2.2 Follow-up Interviews

On 17/08/2011 Bureau Veritas Certification verification team conducted a visit to the project site, OJSC “Odesagas”, and performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of VEMA S.A. and OJSC “Odesagas” were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC “Odesagas”	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving, and reporting Metering equipment control Metering record keeping system, database IT management Training of personnel Quality management procedures and technology Internal audits and check-ups
Consultant: VEMA S.A.	Baseline methodology Monitoring plan Monitoring report Deviations from PDD.

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 documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 11 Corrective Action Requests and 2 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

During the determination process conducted by AIE Bureau Veritas Certification one Forward Action Request was issued (refer to the Determination Report No. UKRAINE-det/0314/2011, of 10/08/2011):

FAR01. Please, submit any documented instruction indicating that the data monitored are to be kept for two years after last ERUs transfer as per JI determination and verification manual.

In course of the current verification the Clarification Request 02 was raised by the Verification Team in order to clarify how the FAR had been addressed. As a response the project participants provided the Order on storage of data collected within the project's monitoring process. The Order prescribes keeping of data monitored and required for verification for two years after the last transfer of emission reduction units for the project. Therefore, based of the submitted documentation the FAR is considered to be closed.

3.2 Project approval by Parties involved (90-91)

The project was approved by the host Party, Ukraine, which is confirmed by the Letter of Approval No. 2401/23/7 dated 05/09/2011 issued by State Environmental Investment Agency of Ukraine. The written project approval by Switzerland, the other Party involved, has also been issued by the DFP of that Party (Letter of Approval #J294-0485 issued by the Federal Office for the Environment FOEN of Switzerland dated 23/08/2011).

The abovementioned written approvals are unconditional.

The identified areas of concern as to the project approval by Parties involved, project participants response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR01).

3.3 Project implementation (92-93)

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



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supply systems characterized by better efficiency compared to centralized systems.

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

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

Implementation of project activities started in late 2003, as provided for in the determined PDD. However, emission reductions achieved in 2003 are conservatively excluded from the calculation. Therefore, 01/01/2004 was taken as a starting date of the crediting period.

Project implementation status in the reporting period of 01/01/2008 – 30/06/2011, including the project milestones, is provided in table 2 below.

Table 2. Project implementation status during the monitoring period

Stage description				Year of implementation
<i>Construction of gas distribution networks</i>				
Steel welded pipes	High pressure, km	Medium pressure, km	Low pressure, km	
	52.70	0.50	14.88	2008
	3.70	9.30	13.80	2009
	15.48	6.15	15.26	2010
	1.09	1.23	1.64	2011
Polyethylene pipes	54.85	52.48	35.58	2008
	14.02	5.69	7.19	2009
	2.27	22.99	15.38	2010
	1.92	2.52	1.48	2011
<i>Installation of gas meters</i>				
Meters	Individuals, units			
	3422			2008
	5673			2009



		2190	2010
		3550	2011
<i>Construction of gas control points (cabinet-type gas control points), gas control units</i>			
Gas control points, cabinet-type gas control points	High pressure, units	Medium pressure, units	
	26	19	2008
	17	15	2009
	43	56	2010
	23	35	2011

Status of project activity implementation during the considered monitoring period complies with the determined PDD version 02.

The verification team can confirm, through the visual inspection and document review, that all physical features of the proposed JI project activity including data collecting and storage systems have been implemented according to the PDD.

The identified areas of concern as to the project implementation, project participants response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR02, CAR03, CL01).

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

The monitoring occurred in accordance with 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 total amount of the consumed natural gas, data on fuel types used by the consumers prior to the gasification and others, 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.

Data sources used for calculating emission reductions such as appropriately calibrated measuring devices, enterprise's data, National Inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine, sectoral methodologies, official data for Ukrainian power grid published by National Environmental Agency of Ukraine, official data of Ministry of Fuel and Energy of Ukraine are clearly identified, reliable and transparent.



Emission factors, including default emission factors, 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 identified areas of concern as to the compliance of the monitoring plan with the monitoring methodology, project participants response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR04, CAR05, CAR06, CAR07, CAR08, CAR09).

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 PDD and revised monitoring plan, including the quality control and quality assurance procedures. The project monitoring is conducted according to standard operational practices established at the enterprise within the existing system of the data collection, accounting and reporting. The scheme of collecting and processing of gas supply data is presented in the section C.1 of the Monitoring Report.

Information on gas consumption is submitted by the legal entities to the Gas accounting department of OJSC "Odesagas" every month. Also, the department for control of gas consumption by consumers for Odesa MPU conducts monthly inspections of meters, issues the statement, signed by the enterprise, and forwards it to the Gas accounting service. The Gas accounting service of OJSC "Odesagas" submits the information to the Gas supply regime department for its processing into basic form by "Atlas SYBIL" program. Gas supply data processed by "Atlas SYBIL" program are provided to the project developer "VEMA S.A.". The information regarding natural gas consumption by the individuals comes to the customer service department of OJSC "Odesagas" in form of paid bills by the consumers. The department for control of gas consumption by consumers for Odesa MPU also conducts monthly inspections of meters, issues the statement, signed by the individual, and forwards it to the customer service department of OJSC "Odesagas". The customer service department processes received information and records it into "Gasolina" program. The data on natural gas supply volume processed by «Gasolina»



program are then provided to “VEMA S.A.”. The length of gas distribution systems implemented under the project is recorded by the technical and assembly service of OJSC “Odesagas”.

The function of the monitoring equipment, including its calibration status, is in order. The measurement equipment used for project monitoring is serviced, calibrated and maintained in accordance with the original manufacturer’s instructions and industry standards; relevant records on measuring devices are kept as required.

The evidence and records used for the monitoring are maintained in a traceable manner. All necessary information for monitoring of GHGs emission reductions are stored in paper or/and electronic formats. For accounting of the natural gas consumed by the legal entities and individuals the electronic accounting programs “Atlas SYBIL” and “Gasolina” are used; the department for software maintenance of OJSC “Odesagas” is responsible for proper operation of these programs.

The data collection and management system for the project is in accordance with the monitoring plan.

The Monitoring Report provides sufficient information on the assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring.

The identified areas of concern as to the data management, project participants response and BVC’s conclusion are described in Appendix A, Table 2 (refer to CAR10, CAR11, CL02).

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 01 January 2008 to 30 June 2011 of the “Reduction of greenhouse gases emissions by gasification of Odesa region” project in Odesa region, 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.



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The verification consisted of the following three phases: i) desk review of monitoring reports, 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 management of VEMA S.A. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 02. The development and maintenance of records and reporting procedures are in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report, version 02, for the reporting period from 01/01/2008 to 30/06/2011 as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. 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.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the 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, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2008 to 30/06/2011

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

Baseline emissions	:2678541	t CO ₂ equivalents;
Project emissions	:1698672	t CO ₂ equivalents;
Emission Reductions	:979869	t CO ₂ equivalents.

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

Baseline emissions	: 2670037	t CO ₂ equivalents;
Project emissions	: 1683102	t CO ₂ equivalents;
Emission Reductions	: 986935	t CO ₂ equivalents.

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

Baseline emissions	: 2877646	t CO ₂ equivalents;
Project emissions	: 1802878	t CO ₂ equivalents;



Emission Reductions : 1074768 t CO₂ equivalents.

For the period from 01/01/2011 to 30/06/2011

Baseline emissions : 1552970 t CO₂ equivalents;

Project emissions : 977478 t CO₂ equivalents;

Emission Reductions : 575492 t CO₂ equivalents.

Total for the period from 01/01/2008 to 30/06/2011:

Baseline emissions : 9779194 t CO₂ equivalents;

Project emissions : 6162130 t CO₂ equivalents;

Emission Reductions : 3617064 t CO₂ equivalents.



5 REFERENCES

Category 1 Documents:

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

- /1/ Monitoring Report for the period from 01/01/2008 till 30/06/2011 version 01 dated 11/08/2011
- /2/ Monitoring Report for the period from 01/01/2008 till 30/06/2011 version 02 dated 07/09/2011
- /3/ Annex 1 to the Monitoring Report for the period 01/01/2008-30/06/2011. Values of the project's monitoring parameters during the period of 01/01/2008-30/06/2011 (Excel file)
- /4/ Annex 2 to the Monitoring Report for the period 01/01/2008-30/06/2011: Registry of gas networks and gas control points with legislative normative documentation (Excel file)
- /5/ Annex 3 to the Monitoring Report for the period 01/01/2008-30/06/2011: Calculation of GHG emission reductions due to gasification of Odesa region (Excel file)
- /6/ Annex 4 to the Monitoring Report for the period 01/01/2008-30/06/2011: Types of metering equipment (Excel file)
- /7/ Project Design Document of the project "Reduction of greenhouse gases emissions by gasification of Odesa region", version 02 dated 05/08/2011
- /8/ Determination Report "Reduction of greenhouse gases emissions by gasification of Odesa region" No. UKRAINE-det/0314/2011 of 10/08/2011 issued by Bureau Veritas Certification
- /9/ Letter of Approval of the Joint Implementation project "Reduction of greenhouse gases emissions by gasification of Odesa region" #2401/23/7 of 05/09/2011 issued by State Environmental Investment Agency of Ukraine
- /10/ Letter of Approval of the project under article 6 of Kyoto protocol (JI) "Reduction of greenhouse gases emissions by gasification of Odesa region" # J294-0485 issued by the Federal Office for the Environment of Switzerland dated 23/08/2011

Category 2 Documents:

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

- /1/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC



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- /2/ Approved CDM methodology ACM0009 «Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas», Version 3.2
- /3/ National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2009
- /4/ Report «Determination of change of specific energy data of heat supply system in the course of gasification», developed by "Ukrenergoprom-2" of 24/06/2011
- /5/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 62 of 15/04/2011 on approval of specific carbon dioxide emission indicators for 2008
- /6/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 63 of 15/04/2011 on approval of specific carbon dioxide emission indicators for 2009
- /7/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 43 of 28/03/2011 on approval of specific carbon dioxide emission indicators for 2010
- /8/ Order of the National Environmental Investment Agency of Ukraine (NEIA) № 75 of 12/05/2011 on approval of specific carbon dioxide emission indicators for 2011
- /9/ Operational software "Sibylle". Extract from the log of actual gas consumption
- /10/ Operational software "Gasoline." Extract from the log of actual gas consumption for the period from 10.2009 to 08.2011 subscriber with personal accounts 088248
- /11/ Examination act dated 10/11/10 of subscriber with personal account 088248 under replacement AOGV on Combi boiler
- /12/ Submitting / receiving act of natural gas for March 2005. Act dated March 31, 2005 between the condominiums "Dyukovskyy", responsible for gas-handling facilities Kirikov Y.S., and OJSC "Odesagas", controller AWG Svyshevskaya Y.
- /13/ Act submitting / receiving natural gas for February 2006. Act dated Feb. 28, 2006 between OJSC "YURTAL" responsible Volokhin V.P. and OJSC "Odesagas", controller AWG Ulyanov E.V.
- /14/ Kominternivske district state administration. Information on the main type of fuel used in settlements of Kominternivske district prior to gasification
- /15/ Kotovsk district state administration. Information on the main type of fuel used in settlements of Kotovsk district prior to gasification
- /16/ Krasni Okny district state administration. Information on the main type of fuel used in settlements of Krasni Okny district prior to gasification
- /17/ Shyryayeve district state administration. Information on the main type of fuel used in settlements of Shyryayeve district prior to gasification



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- /18/ Bilyaivka district state administration. Information on the main type of fuel used in settlements of Bilyaivka district prior to gasification
- /19/ Annex to the Order of transfers of enterprises on reserve fuel types approved by Decree of CMU dated 25.03.09, № 263. Schedule of industrial enterprises (Odesa region) transfer to reserve fuel during the heating season 2011/2012
- /20/ Statement on commissioning of the completed construction of the gas supply system facility. High pressure gas pipeline, Lymans'ke town, Peremoga St.
- /21/ Construction passport of underground (above-ground) gas pipeline, gas input, built by the mounting sector of OJSC "Odesagas" under the 134 GSN project. High pressure gas pipeline located in the Lymanske town, Peremogy St.
- /22/ Statement on commissioning of the completed construction of the gas supply system facility. Underground low-pressure gas pipeline, Shcherbanka town, Rozdilnjansky district
- /23/ Statement of transfer of main fixed assets into operation of OJSC "Odesagas"
- /24/ Statement on commissioning of the completed construction of the gas supply system facility. Above-ground low pressure gas pipeline in Yeremivka village
- /25/ Statement on commissioning of the completed construction of the gas supply system facility. Underground high pressure gas pipeline from Kominternivske AGRS to Kremydivka, Kominternivske district, Odesa region
- /26/ Statement of state acceptance committee on commissioning of the completed construction of the facility. Gas supply of houses in Bolgrad town
- /27/ Statement of state acceptance committee on commissioning of the completed construction of the facility. High pressure gas pipeline from CTGCP of south-eastern part of Gorodne village
- /28/ Statement on commissioning of the completed construction of the gas supply system facility. Low-pressure gas pipeline. Gasification of the apartment house in Bolgrad town, 25 Chapaisvs'ka dyviziya St. 65
- /29/ Statement on commissioning of the completed construction of the gas supply system facility. Low-pressure gas pipeline. Gasification of the apartment house in Bolgrad town, 25 Chapaisvs'ka dyviziya St. 63
- /30/ Statement on commissioning of the completed construction of the gas supply system facility. Low-pressure gas pipeline. Gasification of the apartment house in Bolgrad town, 25 Chapaisvs'ka dyviziya St. 60
- /31/ Schedule of the state verification of domestic gas consumption meters by gas facilities operational administrations for 2009
- /32/ Schedule of the state verification of domestic gas consumption meters by KBO for 2009



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- /33/ Schedule of the state verification of domestic gas consumption meters by KBO for 2010
- /34/ Schedule of the state verification of domestic gas consumption meters by gas facilities operational administrations for 2010
- /35/ Schedule of the state verification of domestic gas consumption meters by KBO for 2011
- /36/ Schedule of the state verification of domestic gas consumption meters by gas facilities operational administrations for 2011
- /37/ Statement No. 312. The installation of gas meter after calibration
- /38/ Passport to the gas meter No. 535
- /39/ Act No. 312 on withdrawal and transfer of gas meter for calibration according to the contract No. 005173
- /40/ Statement to the Act No.312 of individual with the request for calibration
- /41/ Act No.333 on the installation of gas meter after calibration
- /42/ Act No.324 on withdrawal and transfer of gas meter for calibration. Contract No.005173
- /43/ Act No.311 on the installation of gas meter after calibration
- /44/ Act No.162 on the installation of gas meter after calibration
- /45/ Act No.153 on the installation of gas meter after calibration
- /46/ Act No.139 on the installation of gas meter after calibration
- /47/ Log for registration of acts on removal and installation of BSH after verification in the KBO
- /48/ Receipt No. 010437 for payment for natural gas consumption based on the meter recording
- /49/ Receipt No. 097778 for payment for natural gas consumption based on meter recording
- /50/ Receipt No. 098735 for payment for natural gas consumption based on meter recording
- /51/ Electronic interface of the databases (file K0050-C of 13.03.2010) of natural gas consumption by individuals
- /52/ Information regarding verification of the existing BSH and warnings about available debt

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.

- /1/ Serhii Stryzhak – head of the street pipelines and yard input service



- /2/ Natalia Orlova – head of the planning and technical department
- /3/ Olena Hisko – head of the programming department
- /4/ Oleksandr Pogosov –JI project consultant of VEMA S.A.
- /5/ Yevgen Vorobyov – JI project consultant of VEMA S.A.



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
Project approvals by Parties involved				
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?	CAR01 Please, submit the written project approvals by the sponsor Party. Please, add the relevant information concerning project approval to the respective section of the Monitoring Report.	CAR01	OK
91	Are all the written project approvals by Parties involved unconditional?	Conclusion is pending a response to CAR01.	Pending	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	<p>The implementation of the measures under the project during the period of monitoring was carried out according to the determined of PDD version 02.</p> <p>The detailed information about implemented measures by departments and divisions is provided in Supporting document Excel file “Annex 2 Registry of gas networks and GCPs with legislative normative documentation”.</p> <p>CAR02 Please, provide an explanation for the difference between the emission reductions achieved during the monitoring period and the emission reductions specified in the determined PDD.</p> <p>CAR03 The value of ERUs indicated in the Table 1 is not equal to the value of emission reductions specified in the Section D of the MR and the supplementary Excel files. Please, make correction in the MR.</p> <p>CL01</p>	<p>CAR02 CAR03 CL01</p>	<p>OK OK OK</p>

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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Please, indicate the sectoral scope to which the project pertains.		
93	What is the status of operation of the project during the monitoring period?	The project's measures were implemented without any deviations from the implementation plan included in the determined PDD version 02.	OK	OK
Compliance with monitoring plan				
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?	<p>The monitoring occurred in accordance with the monitoring plan included in the determined PDD regarding which the determination has been deemed final.</p> <p>CAR04 Please, indicate in the MR how the leakages from oil and coal extraction activities, petrol combustion by transport during transportation of diesel oil and coal to the consumers, and methane leakage occurred during natural gas transportation by gas transportation networks, were taken into account in project emissions and ERUs calculation.</p> <p>CAR05 Please, add to the MR the algorithm for adjustment coefficients $k_{m,fuel}$ and $k_{h,fuel}$ calculation as per monitoring plan from</p>	<p>CAR04</p> <p>CAR05</p> <p>CAR06</p>	<p>OK</p> <p>OK</p> <p>OK</p>



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>the PDD version 02.</p> <p>CAR06 The units for the default methane emission factor in the course of natural gas transportation and distribution, and the default methane emission factor at technological gas equipment at end consumers place are indicted incorrectly in the MR. Please, make corresponding corrections.</p>		
95 (a)	<p>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 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?</p>	<p>For calculating the emission reductions, such key factors as total quantity of consumed natural gas, information on types of fuels consumed by the end consumers before gasification, and others, 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.</p>	OK	OK
95 (b)	<p>Are data sources used for calculating emission reductions</p>	<p>CAR07 Please, adjust the MR in accordance with</p>	CAR07	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	or enhancements of net removals clearly identified, reliable and transparent?	the monitoring plan provided in the PDD version 02. Please, add to the section B the tables containing the information concerning data sources and monitoring frequency for every parameters used for baseline and project emissions calculation.		
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?	<p>CAR08 Please, in the section B of the MR provide clear and traceable references to the data sources for the following parameters:</p> <ul style="list-style-type: none"> - carbon emission factor when combusting natural gas; - carbon oxidation factor when combusting natural gas; - the default methane emission factor in the course of natural gas transportation and distribution; - the default methane emission factor at technological gas equipment at end consumers place; - reduced GHG emission factor in the course of natural gas transportation to the end consumers. 	CAR08	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	CAR09 Please, add to the MR all the parameters values obtained during the monitoring process for each year of the reporting period.	CAR09	OK
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? 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
Applicable to bundled JI SSC projects only				
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	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	overall monitoring plan, have the project participants submitted a common monitoring report?			
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable	Not applicable	Not applicable
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	There were no deviations and changes of the approved monitoring plan.	Not applicable	Not applicable
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?			
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	<p>The implementation of data collection procedures, including the quality control and quality assurance procedures, are in accordance with the PDD and the determined monitoring plan.</p> <p>CAR10 Please, in the section C of the MR, provide the description how the monitoring of natural gas consumption by individuals and legal entities occurs at the enterprise.</p> <p>CAR11 Please, add to the MR information concerning involvement of the third parties in the monitoring in the framework of the project.</p>	<p>CAR10 CAR11</p>	<p>OK OK</p>
101 (b)	Is the function of the monitoring equipment,	All the equipment, involved in the project monitoring, operated, was calibrated and	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	including its calibration status, is in order?	maintained according to manufacturer's instructions and standards of the industry.		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	All the information that is necessary for GHG emission reductions monitoring is stored in paper and/or electronic formats. During the determination process AIE issued the Forward Action Request concerning issuing of documented instruction/order about storage of the data necessary for monitoring and calculation of emission reductions during 2 years after last transfer of ERUs. To clarify this, CL was issued: CL02 Please, submit the documented instruction/order about data storage to AIE for review.	CL02	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 PDD and the monitoring plan. The verification team confirms the effectiveness of the existing management and operating systems and considers them suitable for reliable monitoring of	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		the project.		
Verification regarding programs of activities (additional elements for assessment)				
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 accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable	Not applicable	Not 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
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE:	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>(a) Describe its sample selection, taking into account that:</p> <p>(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:</p> <ul style="list-style-type: none"> - The types of JPAs; - The complexity of the applicable technologies and/or measures used; - The geographical location of each JPA; - The amounts of expected emission reductions of the JPAs being verified; - The number of JPAs for 			



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>which emission reductions are being verified;</p> <ul style="list-style-type: none"> - The length of monitoring periods of the JPAs being verified; and - The samples selected for prior verifications, if any? 			
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



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 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?	Not applicable	Not applicable	Not applicable

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
CAR01 Please, submit the written project approvals by the sponsor Party. Please, add the relevant information	90	The project was approved by the sponsor Party which is Switzerland with Letter of Approval № J294-0485, issued	The project approval by the sponsor Party was reviewed. The issue is closed on the basis of the



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concerning project approval to the respective section of the Monitoring Report.		by the Federal Office for the Environment (FOEN) dated 23/08/2011. The respective letter of approval was submitted to the verification team for review.	documentation provided and corresponding corrections made in the MR.
<p>CAR02 Please, provide an explanation for the difference between the emission reductions achieved during the monitoring period and the emission reductions specified in the determined PDD.</p>	92	<p>The explanation for the difference between the emission reductions achieved during the monitoring period and the emission reductions specified in the determined PDD was provided in the MR version 02. To quantify GHG emission reductions values of some parameters (net calorific values of all types of fuels, carbon emission factors when fuel combustion takes place, carbon oxidation factors when fuel combustion takes place) that are provided in the national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2009, submitted by the</p>	The issue is closed on the basis of the information provided and the corrections made in the MR version 02.



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		State Environmental Investment Agency of Ukraine to the UNFCCC on 06/08/2011 (the latest version at the time of PDD elaboration) were used. At the same time, in accordance with the approved monitoring methodology in the PDD, for calculating the numbers of ERUs for each reporting year of the monitoring period actual values for each year were used. Therefore the actual calculated amount of emission reductions for each project year is slightly different from those values that were provided in the PDD.	
CAR03 The value of ERUs indicated in the Table 1 is not equal to the value of emission reductions specified in the Section D of the MR and the supplementary Excel files. Please, make correction in the MR.	92	The value of emission reductions indicated in the Table 1, specified in the Section D of the MR and the supplementary Excel files were checked. The necessary corrections were made in the MR version 02.	The issue is closed taking into account the corrections made in the MR.
CAR04 Please, indicate in the MR how the	94	According to the methodology provided in the determined PDD,	The issue is closed on the basis of the explanations



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<p>leakages from oil and coal extraction activities, petrol combustion by transport during transportation of diesel oil and coal to the consumers, and methane leakage occurred during natural gas transportation by gas transportation networks, were taken into account in project emissions and emission reduction calculation.</p>		<p>version 02, indirect extraneous leakage of CO₂, CH₄, N₂O from oil and coal extraction activities, petrol combustion by transport during transportation of diesel oil and coal to end consumer are excluded from a conservative standpoint. According to the PDD methane leakage in the course of gas transportation by gas transportation networks are included in the project emissions. The necessary explanations were added to the MR version 02.</p>	<p>provided and the corrections made in the MR version 02.</p>
<p>CAR05 Please, add to the MR the algorithm for adjustment coefficients $k_{m,fuel}$ and $k_{h,fuel}$ calculation as per monitoring plan from the PDD version 02.</p>	94	<p>The formulae for adjustment coefficients calculation (in accordance with the monitoring plan) were added to the section D of the MR version 02.</p>	<p>The issue is closed based on the corrections made in the MR version 02.</p>
<p>CAR06 The units for the default methane emission factor in the course of natural gas transportation and</p>	94	<p>The necessary corrections were made in the MR version 02.</p>	<p>The MR version 02 was checked. The issue is closed on the basis of the correction provided.</p>



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distribution, and the default methane emission factor at technological gas equipment at end consumers place are indicted incorrectly in the MR. Please, make corresponding corrections.			
CAR07 Please, adjust the MR in accordance with the monitoring plan provided in the PDD version 02. Please, add to the section B the tables containing the information concerning data sources and monitoring frequency for every parameters used for baseline and project emissions calculation.	95 (b)	The issue was addressed in the MR version 02. The tables containing the information concerning data sources and monitoring frequency for every parameters (monitored periodically and fixed parameters) used for baseline and project emissions calculation were added to the section B of the MR version 02.	The MR version 02 was checked. The issue is closed on the basis of the correction provided.
CAR08 Please, in the section B of the MR provide clear and traceable references to the data sources for the following parameters: - carbon emission factor when combusting natural gas; - carbon oxidation factor when combusting natural gas; - the default methane emission	95 (c)	The necessary references to the data sources for carbon emission factor when combusting natural gas; carbon oxidation factor when combusting natural gas; the default methane emission factor in the course of natural gas transportation and distribution; the default methane emission	The MR version 02 was checked. The issue is closed on the basis of the correction provided.



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<p>factor in the course of natural gas transportation and distribution;</p> <ul style="list-style-type: none"> - the default methane emission factor at technological gas equipment at end consumers place; - reduced GHG emission factor in the course of natural gas transportation to the end consumers. 		<p>factor at technological gas equipment at end consumers place; the reduced GHG emission factor in the course of natural gas transportation to the end consumers, were added to the MR version 02.</p>	
<p>CAR09 Please, add to the MR all the parameters values obtained during the monitoring process for each year of the reporting period.</p>	95 (d)	<p>The corresponding information was added to the Annex 1: Values of the project's monitoring parameters in the period of 01/01/2008 - 30/06/2011</p>	<p>The MR version 02 was checked. The issue is closed on the basis of the correction provided.</p>
<p>CAR10 Please, in the section C of the MR, provide the description how the monitoring of natural gas consumption by individuals and legal entities occurs at the enterprise.</p>	101 (a)	<p>The issue was addressed in the MR version 02. OJSC "Odesagas" carries out the monitoring of natural gas fuel consumption by individuals in the following way: 1. Service of consumer gas consumption control conducts monthly inspections of meters, executes the statement signed by the individual and transfers it to the Contact center.</p>	<p>The issue is closed on the basis of the information provided and the corrections made in the MR.</p>



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		<p>2. Bank institutions deliver the information on gas consumption in the form of paid bills to the Contact center of OJSC “Odesagas”.</p> <p>3. Contact centre processes received information and bases it into “Gasolina” program.</p> <p>4. Indices of gas supply volume processed by «Gasolina» program are delivered to the project developer «VEMA S.A.»</p> <p>OJSC “Odesagas” carries out the monitoring of natural gas consumption by legal entities in the following way:</p> <p>1. Legal entities supply information on gas consumption to the Gas accounting service every month.</p> <p>2. Service of consumer gas consumption control conducts monthly inspections of meters, executes the statement signed by the enterprise and transfers it to the Gas accounting service.</p>	
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		<p>3. Gas accounting service provides information to the Gas supply regime department for its processing into basic form by "Atlas SYBIL" program.</p> <p>4. Indices of gas supply volume processed by "Atlas SYBIL" program are delivered to the project developer «VEMA S.A.».</p>	
<p>CAR11 Please, add to the MR information concerning involvement of the third parties in the monitoring in the framework of the project.</p>	101 (a)	<p>The issue was addressed in the MR version 02. According to paragraph 6 of the Model Agreement on the provision of gas supply services, approved by NERC as of 04.01.2000 № 1 (registered by Ministry of Justice on 01.02.2000 № 57/4278) maintenance of gas supply systems inside buildings (low-pressure gas pipelines, gas meters, gas appliances, devices necessary for use of gas in everyday life) is the responsibility of gas transportation organization. Calibration and verification of</p>	<p>The issue is closed on the basis of the information provided and the corrections made in the MR.</p>



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		legal entity's gas meters are performed by respective departments of these enterprises. OJSC "Odesagas" supervises the verification and calibration of gas meters, held by legal entities periodically.	
CL01 Please, indicate the sectoral scope to which the project pertains.	92	The project pertains to the sectoral scope - 3 "Energy demand". This information was added to the MR version 02.	The MR version 02 was checked. The issue is closed.
CL02 Please, submit the documented instruction/order about data storage to AIE for review.	101 (c)	The order on storage of data, which were collected within the project's monitoring, was submitted to the verification team for review.	The issue is closed based on the documentation provided.