



DETERMINATION REPORT VEMA S.A.

DETERMINATION OF THE RECONSTRUCTION OF WATER SUPPLY AND DRAINAGE SYSTEM «LUGANSK VODA LTD.»

REPORT No. UKRAINE/0138/2010

REVISION No. 01

BUREAU VERITAS CERTIFICATION



DETERMINATION REPORT

Date of first issue: 04/10/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: VEMA S.A.	Client ref.: Fabian Knodel

Summary:
 Bureau Veritas Certification has made the determination of the "Reconstruction of water supply and drainage system "Luganskvoda Ltd." project of VEMA S.A. located in Lugansk region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The project is submitted under the track 1 procedure.

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology developed according the Guidance on Criteria for Baseline Setting and Monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE/0138/2010	Subject Group: JI
Project title: "Reconstruction of water supply and drainage system "Luganskvoda Ltd."	
Work carried out by: Oleg Skoblyk – Team leader, Lead Verifier Denis Pishchalov – Team member, Financial Specialist	
Work verified by: Ivan Sokolov – Internal technical reviewer	
Report approved by: Flavio Gomes – Operations Manager	
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Indexing terms

Climate Change, Kyoto Protocol, JI, Emission Reductions, Determination

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Abbreviations

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CL	Clarification Request
CO ₂	Carbon Dioxide
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
I	Interview
IETA	International Emissions Trading Association
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Non Government Organization
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

VEMA S.A. has commissioned Bureau Veritas Certification to determine its JI project “Reconstruction of water supply and drainage system “Luganskvoda Ltd.” (hereafter called “the project”) located in the Lugansk city, towns and villages of Lugansk region, Ukraine.

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

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

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

1.2 Scope

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

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

1.3 GHG Project Description

«Luganskvoda Ltd.» manages the water supply and drainage system on the territory of Lugansk city and Lugansk region. The enterprise purchases the drinking water (performs water intake from surface and underground water sources) and supplies it to the consumer – population,



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companies, villages and cities of Lugansk region through the system of pipelines, pumping plants and water-distribution networks. Separate divisions of “Luganskvoda Ltd.” have their own underground sources of water supply, capacity of which provides 80% of total water supply volume.

The facilities controlled by “Luganskvoda Ltd.” comprise:

- Water-supply networks - 7353,6 km.
- Water-intake points - 597 units.
- Water pumping plants - 170 units.
- Sewage system -1750 km.
- Sewage pumping stations - 118 units.
- Sewage treatment plants - 56 units.

Unsatisfactory technical conditions of water supply and drainage networks in Lugansk region, continuous deterioration of equipment and old technological schemes resulted in increase of water loss and ineffective consumption of electricity in the course of water transportation.

The current JI project is expected to increase the water transportation efficiency in respect of decrease of consumed electricity for transportation of water unit and reduction of water losses and leaks in the water supply system.

The main objective of the project that is being implemented is reduction of electric energy consumption by centralized water supply system in Lugansk region due to its rehabilitation measures, which include replacement and rehabilitation of water pumping equipment and water distribution systems, installation of frequency regulators and optimization of the technological process of water pumping. The reduction of consumption of the electric energy, which is produced in power grid of Ukraine, will lead to the decrease of fossil fuel combustion for electricity production, and as a result to the greenhouse gas emission reduction.

The rehabilitation measures under the project include:

- Replacement of energy intensive pumps by new highly energy efficient ones;
- Optimization of the technological process of water pumping;
- Introduction of automatic air valves on water mains for pressure decrease and improvement of discharge capacity;
- Replacement of water-supply networks;
- Installation of new groups of record keeping devices;
- Introduction of new devices for concealed leakage detection;
- Installation of frequency regulators.

The baseline scenario is continuation of existing situation (“business as usual”) with implementation of minimal maintenance and repair works.



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The project of «Luganskvoda Ltd.» will promote sustainable development in such aspects as improvement of water supply quality, high level of labor and health protection, resolution of the problem of continuous water supply to consumers.

1.4 Determination team

The determination team consists of the following personnel:

Oleg Skoblyk – Team Leader, Climate Change Lead Verifier,

Denis Pischalov – Team member, Financial Specialist.

The determination report was reviewed by:

Ivan Sokolov – Bureau Veritas Certification Internal Technical Reviewer.

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

The determination protocol consists of five tables. The different columns in these tables are described in Figure 1.

The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for “Baseline and Monitoring Methodologies” is omitted because the project participants established their own baseline and monitoring approach (JI specific approach) that is



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in accordance with appendix B of the JI Guidelines and because the questions regarding the used approach are presented in Table 2.

Determination Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) or a Clarification Request (CL) of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2 and 3 to show how the specific requirement is determined. This is to ensure a transparent determination process.



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Determination Protocol Table 2: Requirements checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is then	Gives reference to documents where the answer to the checklist question or item is	Explains how conformance with the checklist question is investigated. Examples of means of verification are	The section is used to elaborate and discuss the checklist question and/or the conforman	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See



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further subdivided. The lowest level constitutes a checklist question.	sub-found.	document review (DR) or interview (I). N/A means not applicable.	ce to the question. It is further used to explain the conclusion s reached.	below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.
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Determination Protocol Table 4: Legal requirements				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 2	Summary of project owner response	Determination conclusion
If the conclusions from	Reference to the checklist	The responses given by the	This section should summarize the



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the Determination are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	question number in Tables 2 and 3 where the Corrective Action Request or Clarification Request is explained.	Client or other project participants during the communications with the determination team should be summarized in this section.	determination team's responses and final conclusions. The conclusions should also be included in Tables 2 and 3, under "Final Conclusion".
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Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD version 01 of 15/08/2010) was submitted by VEMA S.A. on 17/08/2010 together with supporting documentation regarding project implementation and spreadsheets with calculation of GHG emissions.

PDD Version 01 was made publicly available for comments on Bureau Veritas Ukraine web-site (<http://www.bureauveritas.com.ua>) from 23 August 2010 till 21 September 2010.

PDD Version 01 and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws and regulations, JI guidelines, JISC Guidance on criteria for baseline setting and monitoring, and Guidelines for users of the JI PDD Form were reviewed.

The first deliverable of the document review was the Draft Determination Report with 39 CAR's and 14 CL's.

To address Bureau Veritas Certification corrective action and clarification requests, VEMA S.A. revised the PDD and as a response resubmitted it as version 02 of 04/10/2010.

The determination findings presented in this report relate to the project as described in the PDD version 01 of 15/08/2010 and version 02 dated 04/10/2010.

2.2 Follow-up Interviews

On 20-21 August 2010 Bureau Veritas Certification determination team conducted a visit to the project site ("Luganskvoda Ltd."). On-site interviews with the project participant "Luganskvoda Ltd." and the PDD

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developer VEMA S.A. were conducted to confirm the selected information and to clarify some issues identified during document review. The main topics of the interviews are summarized in Table 1. The interviewees are listed in Section 6 References.

Table 1 Interview topics

Interviewed organization	Interview topics
"Luganskvoda Ltd."	<ul style="list-style-type: none"> ➤ Project history ➤ Project approach ➤ Project boundary ➤ Implementation schedule ➤ Organizational structure ➤ Responsibilities and authorities ➤ Training of personnel ➤ Quality management procedures and technology ➤ Rehabilitation/Implementation of equipment (records) ➤ Metering equipment control ➤ Metering record keeping system, database ➤ Technical documentation ➤ Monitoring plan and procedures ➤ Permits and licenses ➤ Local stakeholder's response.
VEMA S.A.	<ul style="list-style-type: none"> ➤ Baseline methodology ➤ Monitoring plan ➤ Additionality proofs ➤ Calculation of emission reduction.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Actions Requests (CAR) are issued, where:

- i) there is a clear deviation concerning the implementation of the project as defined the PDD;
- ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or
- iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where:



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iv) additional information is needed to fully clarify an issue.

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

3 DETERMINATION FINDINGS

In the following sections, the findings of the determination are stated. The determination findings for each determination subject are presented as follows:

- 1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.
- 2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 39 Corrective Action Requests and 14 Clarification Requests.
- 3) The conclusions for determination subject are presented.

3.1 Project Design

The project activity is aimed at decrease of GHG emission in state power grid of Ukraine as a result of modernization of water supply system in Lugansk region, replacement of old pumping equipment by new modern ones, replacement of water distribution networks and introduction of new technologies of water supply.

Bureau Veritas Certification recognizes that the present project is helping the host country fulfill its goals to promote sustainable development. The project is expected to be in line with the specific host-country JI requirements because it is aimed at general improving the conditions of Lugansk region water distribution system, decrease of electricity consumption and water losses in the water supply system. Implementation of the project will reduce GHGs emissions.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.



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The project design is sound and the geographical (Project site is located on the territory of Lugansk city, towns and villages of Lugansk region, in the eastern part of Ukraine) and temporal (20 years) boundaries of the project are clearly defined.

The identified areas of concern as to Project Design, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CARs 01 – CAR 10; CLs 01 – CL 04).

The project has no approvals by the Parties involved, therefore CAR 01 remains pending. CAR 01 will be closed after report finalizing.

The identified area of concern as to Project Duration / Crediting Period, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 22, CL 10).

3.2 Baseline and Additionality

The project "Reconstruction of water supply and drainage system "Luganskvoda Ltd." uses the baseline and monitoring approach developed according to the latest version of Guidance on Criteria for Baseline Setting and Monitoring (Version 02) (hereinafter referred to as Guidance) and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

In accordance with the Paragraph 9 (a) of the Guidance, project participants decided to use an approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI specific approach) with elements of approved CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", Version 02.

The chosen approach regarding baseline setting, firstly, was indicated and described and then applied under section B.1 of the PDD.

The baseline scenario has been identified as the most plausible scenario among all realistic and credible alternatives.

The possible alternative baseline scenarios are the following:

- 1) Continuation of the current situation ("business as usual") – the scenario providing for implementation of minimal repair against a background of generally worsening state of water supply system.
- 2) Rehabilitation of water supply system without JI;
- 3) Partial rehabilitation with exclusion of any non-key arrangements from project, e.g., exclusion of frequency regulation implementation from the projects, etc.

The baseline options considered do not include those options that:



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- do not comply with legal and regulatory requirements; or
- depend on key resources such as fuels, materials or technology that are not available at the project site.

The analysis of abovementioned alternatives (existence of barriers, common practice) showed that the 1st alternative – continuation of the current situation – is the most plausible scenario and can be considered as baseline scenario.

The calculation methods used for ex-ante and ex-post baseline emissions determination are sufficiently described in sections E and D respectively. Although project activity implementation began at the end of 2007, the historical values for 2007 were used for baseline setting, which is considered conservative.

The most recent “Tool for the demonstration and assessment of additionality” (version 05.2) was applied to prove that the anthropogenic emissions are reduced below those that would have occurred in the absence of the JI project.

It was demonstrated in the PDD that a number of barriers prevented the proposed JI project activity. Project developer by means of technological, investment, organizational barriers, simple cost and common practice analysis showed that project activity is additional and would not occur without JI incentive.

The proposed approach to additionality demonstration and assessment provides traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources of GHG.

The identified areas of concern as to Baseline and Additionality, project participants responses and BV Certification’s conclusions are described in Appendix A Table 5 (refer to CARs 11 – 21, CLs 05 – 09).

3.3 Monitoring Plan

The project uses JI specific approach using on approved CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", Version 02 for monitoring.

All categories of data to be collected in order to monitor project and baseline emissions (Option 1) as well as formulae for processing the collected data and calculation of GHG emissions are described in required details.

The most objective and cumulative indicator demonstrating whether the emissions reduction actually occurred is electric energy saving. It may be determined as the difference between basic consumption of electric



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energy and electric energy consumption after project's implementation. If pumps consume electric energy on project level, then all other indicators, such as efficiency of new pumps' operation, water loss at water-distribution networks shall be corresponding.

«Luganskvoda Ltd.» collects and keeps the data relating to electric energy and acquired water for water-supply in the forms of electric energy and acquired water bills, the respective information will be submitted for verification together with monitoring report.

The project and baseline emissions subject to monitoring relate to the electricity consumption by the pumping equipment used for water transportation as this is the only emission source attributable to the current project. The baseline emissions are determined based on historical value of specific electricity consumption per water unit for 2007 (considered as a baseline year) and actual monitored value of water amount supplied to customers in the reporting year. Parameters which are monitored throughout the crediting period (water supplied to customers and electricity consumption for water transportation) are measured for each separate water distribution system (19 separate divisions are united into 13 independent water supply networks).

The monitoring approach explicitly and clearly distinguishes:

- a) Data and parameters that are not monitored throughout the crediting period, but are determined only once and that are available already at the stage of determination regarding the PDD: the total volume of water delivered to consumers in the baseline year (2007) – $M3_b$, total quantity of energy required for transportation of water to consumers in the year of baseline scenario (2007) – kWh_{by} , carbon emission factor for Ukrainian power grid – EF;
- b) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination regarding the PDD are absent.
- c) Data and parameters that are monitored throughout the crediting period: volume of the water supplied to consumers in the water supply system «i» in the project year, $M^3_{i,r}$; quantity of electrical energy for transportation of water to consumers in the system «i» in the project scenario year $kWh_{r,i}$.

The detailed scheme of monitoring data collection, delivery and processing, allocation of responsibilities for Monitoring Plan implementation and Monitoring Report preparation and an operational and management structure that will be implemented to monitor emission reduction are clearly described in the PDD (section D and Annex 3). Monitoring related quality control and quality assurance procedures are outlined subject to checking at the verification phase.



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The analysis performed allowed Bureau Veritas Certification to conclude that the monitoring plan has been chosen in line with the requirements and will provide sufficient accuracy of the data to be monitored.

The identified areas of concern as to Monitoring Plan, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CARs 23 – 33).

3.4 Calculation of GHG Emissions

The method of GHG emission calculation which will be applied during crediting period is based on approved CDM methodology AM0020. The formulae and algorithms used for calculation of project and baseline emissions which will be used in course of project monitoring are sufficiently described in section D and Annex 3 of the PDD.

As per approach proposed, emissions in the baseline scenario will be calculated as follows:

$$E^b = M_r^3 * PPER * EF_r$$

Where:

E^b – baseline emissions in the project year, tCO₂e;

M_r^3 – total amount of water supplied to the consumers in project year, m³;

$PPER = kWh_b / M_b^3$, where

kWh_b – total amount of electricity used for water transportation to the consumers in baseline year (2007), kWh;

M_b^3 – total amount of water supplied to the consumers in the baseline year (2007), m³;

EF – carbon emission factor for Ukraine in “y” year, taken from «Study “Standardized emission factors for the Ukrainian electricity grid” (Version 5, 02 February 2007) developed by Global Carbon B.V.»;

As per approach proposed, the project emissions in the project scenario are calculated as follows:

$$E^r = kWh_r * EF,$$

E^r – CO₂ emissions as a result of electric energy consumption for water supply, in project year, t CO₂e;

where:

EF_r - carbon emission factor for Ukraine in “y” year, taken from «Study “Standardized emission factors for the Ukrainian electricity grid” (Version 5, 02 February 2007) developed by Global Carbon B.V.»;

kWh_r - total quantity of electric energy kWt*hour, necessary for water transportation to the consumers in “y” year of project scenario;



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The annual emission reductions are calculated as follows:

$$ER = E^b - E^r$$

where:

E^b – baseline GHG emissions in reporting year, t CO₂e;

E^r – project GHG emissions in reporting year, t CO₂e.

With reference to this approach and CDM methodology AM0020, project does not lead to any leakage.

The above mentioned calculation method is applied for ex post emission reduction calculation. For ex-ante estimation of baseline and project emission specially elaborated formulas were used because it was found impossible to preliminary estimate the amount of water which will be supplied to the customers in future years and amount of electricity reduction due to project activity. Since in the course of project's elaboration quantity of supplied water and consumed electric energy are unknown, the ex-ante calculation method is based on data which were known to project developer at stage of PDD development such as amount of consumed electric energy in baseline year 2007, efficiency of present pumping equipment and equipment which is planned to be installed, and water losses in the water-supply network (actual and previously estimated).

The approach used for ex-ante emission calculation incorporates the following formulas:

Project emission calculation:

$$E^r = \sum ([P_{r(i)} - V_{(i)}] * EF,$$

where:

E^r – project emissions for each reporting year, tCO₂e;

$P_{r(i)}$ – total amount of electric energy necessary for transportation of water to the suppliers in "i" system (independent water supply network) in baseline year (2007), kWh;

$V_{(i)}$ – electric energy saving due to rehabilitation of water-supply network, kWh;

$$P_{r(i)} = [P_{b(i)} * BBE_i] / [PBE_i],$$

where:

P_b – total amount of electric energy necessary for transportation of water to the suppliers in baseline year, kWh;

BBE_i - efficiency factor of pumps in baseline year, %;

PBE_i - efficiency factor of pumps in project year, %;

$$V_{(i)} = P_{b(i)} - P_{b(i)} * (100 - L_b) / (100 - L_r),$$



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where:

$P_{b(i)}$ – total amount of electric energy necessary for transportation of water to the suppliers in “i” system in basic year, kWh;

L_b – water loss in the water supply network under baseline scenario, %;

L_r – water loss in the water supply network under project scenario, %.

Baseline emission calculation:

$$E^b = P_b * EF$$

where:

E^b –CO₂ emissions due to generation of electric energy for state electrical grid consumed by the pumping stations, where the energy-saving technologies are to be implemented under the project, tCO₂e.

P_b – total amount of electric energy necessary for water supply to the consumers in baseline year (2007), kWh (for ex-ante calculation it is assumed that the amount of electricity consumed in the reporting year will remain the same as in the baseline year 2007, which is a conservative assumption).

EF – carbon emission factor subject to electric energy consumption reduction, CO₂e/ thousand kWh

Input data for calculations and the calculations per se are presented on the comprehensive spreadsheet which was made available to Bureau Veritas Certification (Accompanying documents 1, 2, 3). The results are summarised in Section E. The verifiers checked the calculations and found them accurate.

The calculated amount of project emission reduction over the crediting period 2008 – 2012 is 692363 tCO₂e with the annual average emission reduction in amount of 138473 tCO₂e.

Emission reduction for the period 2013 – 2027 is 2273415 tCO₂e, annual average is 151561 tCO₂e.

The identified areas of concern as to Calculation of GHG Emissions, project participants response and BV Certification’s conclusion are described in Appendix A Table 5 (refer to CARs 34-37).

3.5 Environmental Impacts

In accordance with legal basis of Ukraine “On environmental protection” and “Contents and structure of materials for assessment of environmental impact in the course of projecting and building of enterprises, houses and constructions”, the “Luganskvoda Ltd.” is not obliged to elaborate Assessment of Environmental impact for present project activity.



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The project implementation doesn't provide for any negative impacts on environment. The only impact on environment is dismantled equipment, which will be applied in the future as secondary material and recycled.

"Luganskvoda Ltd." has all necessary permissions, limits and license required by Ukrainian legislation, including permits for "Special water use" for all sites and departments.

Implementation of this project will make it possible to improve servicing of water consumers. Experience of the employees of "Luganskvoda Ltd." and adherence to the norms "On drinking water and drinking water supply" make it possible to minimize occurrence of emergency situations in the course of this project implementation.

There will be no transboundary impacts of project activity in accordance with their determination in the text of "Convention on Long-range Transboundary Pollution" ratified by Ukraine.

The identified areas of concern as to Environmental Impacts, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 39, CL 11, CL 12, CL 14).

3.6 Comments by Local Stakeholders

Since the project activities do not imply any negative environmental impacts and negative social effect, special public discussions were not necessary. Consultations with Stakeholders were conducted at the meetings of local authorities.

No comments from local stakeholders were received.

The identified areas of concern as to Comments by Local Stakeholders, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CL 13).

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the AIE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the website <http://www.bureauveritas.com.ua> on 23/08/2010 and invited comments till 21/09/2010 by Parties, stakeholders and non-governmental organizations.

No comments from stakeholders were received.



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5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the project “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.”, Ukraine” in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

The review of the project design documentation, the subsequent follow-up interviews, and the resolution of the Corrective Action Requests have provided Bureau Veritas Certification with the sufficient evidences to determine the fulfillment of the above stated criteria and to demonstrate that the project is additional.

The PDD provides analysis of investment, technological, organizational barriers, and common practice analysis to determine that the project activity itself is not the baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed one pending issue related to the current determination stage of the project: the written approval of the project by the host Party (Ukraine) was not obtained. If the written approval by the host Party is awarded, it is our opinion that the project as described in the Project Design Document, Version 02 dated 04/10/2010 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria, meeting the expectations of interested parties.

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

6 REFERENCES**Category 1 Documents:**

Documents provided by the project participants and related directly to the GHG components of the project.



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- /1/ PDD “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.”, version 01 dated 15/08/2010
- /2/ PDD “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.”, version 02 dated 04/10/2010
- /3/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006
- /4/ Guidelines for Users of the Joint Implementation Project Design Document Form, version 04, JISC
- /5/ Joint Implementation Project Design Document Form, version 01
- /6/ Glossary of JI terms, version 02, JISC.
- /7/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC.
- /8/ Approved CDM baseline methodology AM0020 “Baseline methodology for water pumping efficiency improvements”, Ver.02
- /9/ Tool for the demonstration and assessment of additionality, Version 05.2
- /10/ JISC “Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee.” Version 03
- /11/ Letter of Endorsement № 1221/23/7 of August 18, 2010 issued by National Environmental Investment Agency of Ukraine.

Category 2 Documents:

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

- /1/ Information on the availability of permit documentation of "Luganskvoda Ltd." For 2010
- /2/ Permission for special water use Separate Division "Southern Administration of "Luganskvoda Ltd.", id.code 35937046, # Ukr 317 Lug, valid from 01/08/2008 till 01/08/2011
- /3/ Annex to the Permit for special water use # Ukr 138 Lug “Permitted discharge of pollutants with water reverse” from 01/08/2008 to 01/04/2011
- /4/ Permit for special water use № Ukr 328 Lug valid from 01/08/2008 to 01/04/2011 issued by State administration of environmental protection in Lugansk region
- /5/ Permit for special water use № Ukr 248 Lug valid from 01/01/2008 to 01/01/2012 issued by State administration of environmental protection in Lugansk region
- /6/ Permit for special water use № Ukr 603 Lug valid from 01/06/2008 to 01/12/2011 issued by State administration of environmental protection in Lugansk region



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- /7/ Annex to the Permit for special water use № Ukr 387 Lug “Limit for water usage for 2010 in amount of 487,0 m3 per 1000,0 m3 issued by State administration of environmental protection in Lugansk region
- /8/ Permit for special water use № Ukr 383 Lug valid from 01/10/2008 to 01/10/2012 issued by State administration of environmental protection in Lugansk region
- /9/ State administration of environmental protection in Lugansk region. Permission for special water use № 461 Lug
- /10/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 615 Lug
- /11/ Annex to the Permit for special water use № Ukr 502 Lug of Separate Division “Krasnoluchskiy department” “Limit for water usage for 2010 in amount of 513,5 m3 per 1000,0 m3 issued by State administration of environmental protection in Lugansk region
- /12/ Permit for special water use № Ukr 198 Lug valid from 01/10/2008 to 01/10/2012 issued by State administration of environmental protection in Lugansk region
- /13/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 225 Lug
- /14/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 392 Lug
- /15/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 044 Lug
- /16/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 292 Lug
- /17/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 416 Lug
- /18/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 238 Lug in Stahanov city
- /19/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 495 Lug in Starobelsk city
- /20/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 030 Lug in Belovodsk
- /21/ State administration of environmental protection in Lugansk region. Permission for special water use PLC Burakino № Ukr 775 Lug
- /22/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 424 Lug in Novoaidar city
- /23/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 277 Lug
- /24/ State administration of environmental protection in Lugansk region. Permission for special water use in Markovka № Ukr 033 Lug



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- /25/ State administration of environmental protection in Lugansk region. Permission for special water use in Melovos № Ukr 422 Lug
- /26/ List Separate Divisions of "Luganskvoda Ltd."
- /27/ Permission for emissions into atmosphere for 2010 of "Luganskvoda Ltd."
- /28/ Permission № 4424883502-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Petrovskaya pumping station) by Ministry for environmental protection of Ukraine for the period from 04/11/2009 till 04/11/2014
- /29/ Permission # 4424583908-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Aydarska pumping station) by Ministry for environmental protection of Ukraine on 04/11/2009 for the period from 04/11/2009 till 04/11/2014
- /30/ Permission # 4411470400-13 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Mologvardiyska pumping station) by Ministry for environmental protection of Ukraine on 28/10/2009 for the period from 04/11/2009 till 04/11/2014
- /31/ Permission # 4421456200-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Mologvardiyska pumping station) by Ministry for environmental protection of Ukraine on 28/10/2009 for the period from 28/10/2009 till 28/10/2019
- /32/ Permission # 4421485503-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Krasnyanska pumping station) by Ministry for environmental protection of Ukraine on 28/10/2009 for the period from 28/10/2009 till 28/10/2014 Ministry for environmental protection of Ukraine
- /33/ Permission # 4410136600-170 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Kondrashevskaya pumping station) by Ministry for environmental protection of Ukraine on 04/11/2009 for the period from 04/11/2009 till 04/11/2014
- /34/ Permission # 4424884004-2 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Vilhivska pumping station) by Ministry for environmental protection of Ukraine on 04/11/2009 for the period from 04/11/2009 till 04/11/2014
- /35/ Permission # 4410136600-166 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Industry site RTC) by Ministry for environmental protection of Ukraine on 28/10/2009 for the period from 28/10/2009 till 28/10/2019



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- /36/ Permission # 4422281101-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Lugansk pumping station) by Ministry for environmental protection of Ukraine on 04/11/2009 for the period from 04/11/2009 till 04/11/2014
- /37/ Permission # 4424880502-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Southern administration "Luganskvoda Ltd." (Derkulska pumping station) by Ministry for environmental protection of Ukraine on 28/10/2009 for the period from 28/10/2009 till 28/10/2014
- /38/ Permission # 4422210100-12 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Lutuginskiy department "Luganskvoda Ltd." (Production site Lutugine RTC) by Ministry for environmental protection of Ukraine on 25/12/2008 for the period from 25/12/2008 till 25/12/2018
- /39/ Permission # 4422256100-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Lutuginskiy department "Luganskvoda Ltd." (Production site of Lutugine water intake) by Ministry for environmental protection of Ukraine on 25/12/2008 for the period from 25/12/2008 till 25/12/2018
- /40/ Permission # 4422256400-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Lutuginskiy department "Luganskvoda Ltd." (Production site #3, village name after Lenin, 3rd lifting) by Ministry for environmental protection of Ukraine on 25/12/2008 for the period from 25/12/2008 till 25/12/2018
- /41/ Permission # 4412770600-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, Birjukove village) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /42/ Permission # 4412745702-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, water source Hmel'nitske) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /43/ Permission # 4412745000-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, pumping station, Nagirne village) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /44/ Permission # 4412745000-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, Volodarskiy water intake site) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018



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- /45/ Permission # 4412700000-20 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, Pionerske water source) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /46/ Permission # 4412700000-19 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, Mars water source) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /47/ Permission # 4412700000-17 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, pumping station #1) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /48/ Permission # 4412770600-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, administrative and household complex , Chervonopartizanskiy city) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /49/ Permission # 4412700000-16 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Sverdlovskiy department "Luganskvoda LTD." (Production site, administrative and household complex) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /50/ Permission # 4420383001-2 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site, Main CPS) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /51/ Permission # 4420383001-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site, OS Rovenki city) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /52/ Permission # 4412347700-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site, OS Jasenkivske) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /53/ Permission # 4410000000-17 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: CPS Mist) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014



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- /54/ Permission # 4410000000-18 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water source "Almazniy") by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /55/ Permission # 4410000000-19 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water source "Grimychiy") by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /56/ Permission # 4420383001-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water source "Tacino") by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /57/ Permission # 4412300000-26 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water source RCV quarter Haharina) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /58/ Permission # 4412300000-27 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water-folding unit) by Ministry for environmental protection of Ukraine on 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /59/ Permission # 4424500000-12 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water pumping stations complex 2-nd lift of Khoroshanskiy water intake) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /60/ Annex for permission for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." complex of 2-nd lift of Khoroshanskiy water intake
- /61/ Permission # 4424500000-12 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: water pumping stations complex 2-nd lift of Khoroshanskiy water intake) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /62/ Permission # 4423100000-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy



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- department "Luganskvoda LTD." (Production site: building of water pumping station on Rajgorodskiy water intake wells) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /63/ Permission # 4424500000-10 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Slovjanoserbsk) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /64/ Permission # 4424500000-10 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Slovjanoserbsk) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /65/ Permission # 4424500000-11 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Slovjanoserbskiy water intake) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /66/ Permission # 4424500000-13 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Krasnolimanskiy water intake) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /67/ Permission # 4424500000-14 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Krasnolimanskiy water intake) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
- /68/ Permission # 4411640000-5 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Krasnolutskiy department "Luganskvoda LTD." (Production site: Elizavetinskiy) by Ministry for environmental protection of Ukraine on 31/12/2010 for the period from 31/12/2010 till 31/12/2013
- /69/ Permission # 4411640000-27 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Krasnolutskiy department "Luganskvoda LTD." (Production site: #11 - CPS "KRUM") by Ministry for environmental protection of Ukraine on 31/12/2008 for the period from 31/12/2008 till 31/12/2013
- /70/ Permission # 4411647300-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Krasnolutskiy department "Luganskvoda LTD." (Production site: #9 - CPS "Khrustalske") by Ministry for environmental protection of Ukraine on 31/12/2008 for the period from 31/12/2008 till 31/12/2013
- /71/ Permission # 4411600000-30 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Krasnolutskiy



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- department "Luganskvoda LTD." (Production site: #8 - CPS "Dolzhnik") by Ministry for environmental protection of Ukraine on 31/12/2008 for the period from 31/12/2008 till 31/12/2013
- /72/ Permission # 4424555100-2 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Krasnolutskiy department "Luganskvoda LTD." (Production site: #8 - CPS "Dolzhnik") by Ministry for environmental protection of Ukraine on 19/12/2008 for the period from 19/12/2008 till 19/12/2013
- /73/ Annex for permission for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Slovjanoserbskiy department "Luganskvoda LTD."
- /74/ Permission # 4410136600-143 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." (pump station ground) by Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /75/ Permission # 4410136600-142 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." (pump station ground) by Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /76/ Permission # 4410136600-141 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." (industrial area of pumping station #3) by Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /77/ Permission # 4410136600-140 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." (industrial area of pumping station #4) by Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /78/ Permission # 4410136600-135 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." Station of 3-rd lift. Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /79/ Permission # 4410136600-136 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." Kamjanobridske pumping-over. Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /80/ Permission # 4410136300-134 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." Industrial ground of workshop #1 of water distribution network. Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till



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- 20/07/2019
- /81/ Permission # 4410136300-145 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." Industrial ground of workshop #2 of plumbing network. Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /82/ Permission # 4410136300-133 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." Host pumping station of 4-th lift. Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
- /83/ Permission # 4423855300-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 1-st lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
- /84/ Permission # 4423855300-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 2-nd lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
- /85/ Permission # 4423855300-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 2-nd lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
- /86/ Permission # 4423855300-5 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 3-nd lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
- /87/ Permission # 4423855300-6 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 4-nd lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
- /88/ Permission # 4412100000-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Pervomajskiy department "Luganskvoda LTD." Mariivska pumping station #4. Ministry for environmental protection of Ukraine on 22/07/2008 for the period from 22/07/2008 till 22/07/2014
- /89/ Permission # 4412100000-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Pervomajskiy department "Luganskvoda LTD." Vilkhovska pumping station #6. Ministry for environmental protection of Ukraine on 22/07/2008 for the period from 22/07/2008 till 22/07/2014



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- /90/ Agreement №169 for the supply of electricity, August 1, 2008
- /91/ 2009-2010 Year Report (part 1), consumption and payment of electricity
- /92/ Water Supply Scheme of Lugansk region
- /93/ Permits for special water use. Issued by the State Department of Environmental Protection in the Luhansk region. Ministry of Environmental Protection of Ukraine.
- /94/ Report OP Bryanka Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /95/ Report Svetlychanske Management LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /96/ Report ZFS Management LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /97/ OP Bryanka Department LTD "Luganskvoda" losses of active electricity power in May 2009
- /98/ Report Antratsitovsky Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /99/ Report Slavyanoserbysk Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /100/ Report Perevalskiy Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /101/ Report Chervonozoryany Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /102/ Report Yuzhne Management LTD "Luganskvoda" on consumption and payments of electricity in May 2009
- /103/ Report Rovno Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /104/ Report Stakhanov Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /105/ Report for Kirovskiy department of "Luganskvoda LTD." on consumption and payment for electricity in 2009 may
- /106/ Report for Pervomajskiy department of "Luganskvoda LTD." on consumption and payment for electricity in 2009 may
- /107/ Report for Starobelskiy regional department of "Luganskvoda LTD." on consumption and payment for electricity in 2009 may
- /108/ Contract for delivery of electricity power #169 from 20.08.2008
- /109/ List of customers objects and units "Luganskvoda LTD."
- /110/ Amount of delivery of electricity for Compatible consumers



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- /111/ Electrical circuit and points of settlement accounting and point of networks distribution from 20.08.2008
- /112/ Data for calculated measures of accounting of Customers electricity: SD Bryanskiy department
- /113/ Electrical circuit and points of settlement accounting and point of networks distribution from 20.08.2008
- /114/ Settlement means details of electric power consumers: SD Pervomaiskiy Department LTD. Luganskvoda "
- /115/ Settlement means details of electric power consumers: SD Pivdenne Upravlinnia LTD. Luganskvoda "
- /116/ Settlement means details of electric power consumers: SD Perevalskiy Department LTD. Luganskvoda "
- /117/ Act of carrying a membership division of electricity grid and operational responsibilities of the parties to the contract
- /118/ Rank of calculations for the reactive power flowing to the contract of electricity supply from 20.08.2008
- /119/ Electrical circuit and points of settlement accounting and point of networks distribution from 20.08.2008
- /120/ Supply and payment report for July 2008, all administrations and governments
- /121/ Report (Part 2) Year 2007 of consumption and payment for electricity in November 2007, all offices and departments LTD "Luganskvoda"
- /122/ Water Supply Scheme of Lugansk region
- /123/ Scheme of transporting water and water-lifting LTD "Luganskvoda"
- /124/ Methodological manual on providing accounting and water loss regulation
- /125/ Special edition № 2 "Water and wastewater management"
- /126/ Svetlychanska pumping station LTD "Luganskvoda "Pump INV № 10001
- /127/ Svetlychanska pumping station LTD "Luganskvoda " Pump INV № 43134
- /128/ Svetlychanska pumping station LTD "Luganskvoda" Pump INV № 43134
- /129/ Svetlychanska pumping station LTD "Luganskvoda "energy meter
- /130/ Svetlychanska pumping station LTD "Luganskvoda" electricity meter №1656590
- /131/ Svetlychanska pumping station LTD "Luganskvoda" electricity meter №255734



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- /132/ Svetlychanska pumping station LTD "Luganskvoda" electricity meter №63832095
- /133/ Svetlychanska pumping station LTD "Luganskvoda" electricity meters
- /134/ Svetlychanska pumping station LTD "Luganskvoda" electricity meter №63832098
- /135/ Svetlychanska pumping station LTD "Luganskvoda" pump room
- /136/ Work register of drinking water pump station "Svetlichnaya"
- /137/ Electricity meter data of Svetlichnaya station
- /138/ Svetlychanska pumping station LTD "Luganskvoda" flow meter
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- /142/ Accounting journal of the daily losses of electricity "Svetlychanskoho Management LTD "LUGANSKVODA" 2008
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- /146/ Operational register "Svetlychanske ACU LTD LUGANSKVODA" 2007
- /147/ Operational register of Control room "Svetlychanskoho Management LTD LUGANSKVODA" 2008
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- /158/ Krimskiy plot LTD "Luganskvoda" Journal of working of pumping aggregates and accounting of supply and losses of electricity



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- /159/ Operational register Krimskiy plot LTD "Luganskvoda"
- /160/ Alchevskiy department LTD "Luganskvoda" pumping station electricity meters #757179
- /161/ Alchevskiy department LTD "Luganskvoda" pumping station electricity meters #894250
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- /164/ Alchevskiy department LTD "Luganskvoda" machine room #2
- /165/ Krimskiy plot LTD "Luganskvoda" flow meters: #09011L, #93055, #77055, #01061L
- /166/ Alchevskiy department LTD "Luganskvoda" technological scheme
- /167/ Alchevskiy department LTD "Luganskvoda" operational register
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- /186/ Three phases induction electric meter, passport of 2005, LTD "Luganskvoda", 2009
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- /188/ Ledger, LTD "Luganskvoda "
- /189/ The list of installed electricity meters, LTD "Luganskvoda", 01/01/2009
- /190/ Act № 2602 of acceptance/replacement/technical review of accounting settlements in electrical installations up to 1000 V
- /191/ Reactive energy meter. Passport CE6811
- /192/ Electric three-phase multirate meter ET. Passport
- /193/ Separate subdivision Lugansk administration LTD "Luganskvoda", building
- /194/ Improvement program of Lugansk region water supply, that is proposed to be financed in 2008 via funds from various sources
- /195/ Meeting report of qualifying commission on awarding grades December 25, 2008, LTD "Luganskvoda"
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- /197/ Daily data LTD "Luganskvoda" 11.11.2009
- /198/ Water consumption balance for 2009, LTD "Luganskvoda"
- /199/ Products for 2008, LTD "Luganskvoda"
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- /205/ South department, Verhunska PNS, LTD "Luganskvoda", electricity meter # 3204636, # 1657215, # 3384616, # 1784992, # 2N02614, # 1784992, # 2024792, # 1656547, # 2D24792, # 2820021, # 19102419
- /206/ South Separate Division LTD "Luganskvoda", building
- /207/ Accounting journal of implementation plan for water supply South Division, LTD "Luganskvoda", 01.06.2010
- /208/ Accounting journal of implementation plan for water efficiency of plots and water intakes of main department, LTD "Luganskvoda", 2009



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- /209/ List of pumping station equipment of 2-nd lift, Novosvilovskiy water intake, Lobachevskiy water intake
- /210/ Report for lifted water of South department for June 2009
- /211/ Act of putting the equipment into operation, South Division LTD "Luganskvoda", 6.03.2009
- /212/ Verification certificate of measuring instrument, ultrasound flow meter, LTD "Luganskvoda"
- /213/ List of measuring devices in usage and are supposed to verify in 2010, LTD "Luganskvoda"
- /214/ Manometer passport on South administration, Petrovskiy area.
- /215/ Act of measuring inner pressure of RU pipeline, South administration on Petrovskiy p.s. LTD "Luganskvoda"
- /216/ Calculation of default device to the flow meter, Petrovska p.s. LTD "Luganskvoda"
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- /223/ Act of reception-introduction into operation, southern Management LTD "Luganskvoda "
- /224/ Datas of wastes' compound and properties, which are forming, and also the level of danger for environment and human health, LTD "Luganskvoda "
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- /226/ Documents where extras volumes are stated in order to receive permission on pollutants into the air from stationary sources, LTD "Luganskvoda "
- /227/ Scheme of water distribution units at the site of Novosvetlovskoy pumping station of 2nd lift
- /228/ Journal of working of pumping aggregates of Novosvitlovska p.s. 2-nd lift, LTD "Luganskvoda"
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- /231/ Working guidance of pumping station, 2008
- /232/ Examination results on occupational safety of of Novosvitlovska p.s. 2-nd lift, LTD "Luganskvoda" (Syrenko A.I.)
- /233/ Lutuhinskiy plot, LTD "Luganskvoda" , pump #477535
- /234/ Lutuginskiy area water-pipe building scheme LTD "Luganskvoda"
- /235/ Electricity supply scheme of Lutuginskii department production area LTD "Luganskvoda"
- /236/ Flow meter,Lutuhinskiy area, Lutuhinskiy department LTD "Luganskvoda"
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- /238/ Pump #0729, Lutuhinskiy area, Lutuhinskiy department LTD "Luganskvoda"
- /239/ Accounting journal of daily electricity of Lutuhinskiy area, Lutuhinskiy department LTD "Luganskvoda"
- /240/ Register of pump aggregates work on the Lutunginskii water-pipe of Lutuginskii production area
- /241/ Flow meter,Lutuhinskiy area, Lutuhinskiy department LTD "Luganskvoda" #9205
- /242/ Manual for frequency converters MDE
- /243/ Record book for studuing of pump aggregates' work in Lutuginskii production area LTD "Luganskvoda" 20.08.2009
- /244/ Report on technological accounting devices of LTD "Luganskvoda" 2009
- /245/ List of installed electricity meters in South Department LTD "Luganskvoda" 01.01.2010
- /246/ Water use report for II quarter 2010 Luhanskiy department, Lutuhinskiy department, South department LTD "Luganskvoda"
- /247/ Water use report for IV quarter 2009 LTD "Luganskvoda"
- /248/ Water use report for III quarter 2008 LTD "Luganskvoda"
- /249/ Act of putting a pumping equipment into operation, Khoroshanskiy, Jashikovskiy water intake 2010
- /250/ Consolidated action plan on energy saving on LTD "Luganskvoda"
- /251/ Thematic plan and an education program for machinists of pumping stations and aggregates, LTD "Luganskvoda"
- /252/ Water intake and water usage on LTD "Luganskvoda" 2009



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- /253/ Existing organizational structure of LTD “Luganskvoda”
- /254/ Permission # 4412770600-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division “Sverdlovskiy department “Luganskvoda LTD.” (Production site, Birjukove village) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
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- /256/ Permission # 4412745000-3 for pollutant emissions into atmosphere by stationary sources issued for Separate Division “Sverdlovskiy department “Luganskvoda LTD.” (Production site, pumping station, Nagirne village) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
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- /260/ Permission # 4412700000-17 for pollutant emissions into atmosphere by stationary sources issued for Separate Division “Sverdlovskiy department “Luganskvoda LTD.” (Production site, pumping station #1) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
- /261/ Permission # 4412770600-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division “Sverdlovskiy department “Luganskvoda LTD.” (Production site, administrative and household complex , Chervonopartizanskiy city) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 01/07/2018
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- /264/ Permission # 4420383001-1 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site, OS Rovenki city) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /265/ Permission # 4412347700-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site, OS Jasenkivske) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /266/ Permission # 4410000000-17 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: CPS Mist) by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /267/ Permission # 4410000000-18 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water source "Almazniy") by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
- /268/ Permission # 4410000000-19 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Rovenkivskiy department "Luganskvoda LTD." (Production site: water source "Grimychiy") by Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 26/06/2009 for the period from 26/06/2009 till 26/06/2014
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- /273/ Annex for permission for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." complex of 2-nd lift of Khoroshanskiy water intake
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- /277/ Permission # 4424500000-10 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Slovjanoserbsk) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020
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- /279/ Permission # 4424500000-13 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Alchevskiy department "Luganskvoda LTD." (Production site: Krasnolimanskiy water intake) by Ministry for environmental protection of Ukraine on 08/02/2010 for the period from 08/02/2010 till 08/02/2020



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- /294/ Permission # 4410136300-145 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Luhanskiy department "Luganskvoda LTD." Industrial ground of workshop #2 of plumbing network. Ministry for environmental protection of Ukraine on 20/07/2008 for the period from 20/07/2008 till 20/07/2019
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- /297/ Permission # 4423855300-4 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 2-nd lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
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- /299/ Permission # 4423855300-5 for pollutant emissions into atmosphere by stationary sources issued for Separate Division "Operation department of WFS "Luganskvoda LTD." Pumping station of 3-nd lift. Ministry for environmental protection of Ukraine on 01/07/2008 for the period from 01/07/2008 till 20/07/2019
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- /303/ Agreement №169 for the supply of electricity, August 1, 2008
- /304/ 2009-2010 Year Report (part 1), consumption and payment of electricity
- /305/ Water Supply Scheme of Lugansk region
- /306/ Permits for special water use. Issued by the State Department of Environmental Protection in the Luhansk region. Ministry of Environmental Protection of Ukraine.
- /307/ Report OP Bryanka Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /308/ Report Svetlychanske Management LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /309/ Report ZFS Management LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /310/ OP Bryanka Department LTD "Luganskvoda" losses of active electricity power in May 2009
- /311/ Report Antratsitovsky Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /312/ Report Slavyanoserbsk Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /313/ Report Perevalskiy Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009



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- /314/ Report Chervonozoryany Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /315/ Report Yuzhne Management LTD "Luganskvoda" on consumption and payments of electricity in May 2009
- /316/ Report Stakhanov Department LTD "Luganskvoda" on consumption and payment of electricity in May 2009
- /317/ Form of the statistical state accounting of 11-MTP for "Company" Luganskvoda " (2007 year)
- /318/ Resolution "On approval of the procedure for of tariffs on services in the centralized water-supply and overflow-pipe"
- /319/ Letter #309 of 20/05/2010 from equipment supplier "Vulver" LLC regarding confirmation of pumping equipment lifetime
- /320/ Methodology of branch technological standards of drinking water use at the companies of water supply and drainage industry of Ukraine

Persons interviewed:

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

- /1/ Anchishkin A.G. – Head of energy and mechanical services
- /2/ Tsygoev A.M. – Main power engineering specialist
- /3/ Tkachenko O.M. – Deputy of main power engineering specialist
- /4/ Pavlenko E.M. – Engineer
- /5/ Movchan S.V. – Head of Production and Technical Department
- /6/ Shyngareva I.I. – Hydro geologist
- /7/ Sleta U.N. – Lead engineer
- /8/ Ivanova G.V. – Lead engineer
- /9/ Pryadko V.B. – Head of Slavyanoserbsk division
- /10/ Vandin A.I. – Operator of Slavyanoserbsk pumping station
- /11/ Mognyakov D.N. – Chief Engineer of Lutugino division
- /12/ Pryadko V.B. – Head Krasnolimanskaya pumping station
- /13/ Kashyntsev A.V. – Operator of Krasnolimanskaya pumping station
- /14/ Didenko A.P. – Head of Slavyanoserbsk pumping station of the third lift
- /15/ Bashlyakova S.L. – Operator of Slavyanoserbsk pumping station
- /16/ Artsev A.V. – Head of Slavyanoserbsk lift pumping station of the fourth lift
- /17/ Shetinina I.V. – Operator of Slavyanoserbsk pumping station
- /18/ Apostolaka S.P. – JI Consultant of VEMA S.A.
- /19/ Vorobyov E.V. – JI Consultant of VEMA S.A.



DETERMINATION REPORT

APPENDIX A: JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Projects

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
<p>1. The project shall have the approval of the Parties involved</p>	<p>Kyoto Protocol Article 6.1 (a)</p>	<p>CAR 01. The project has no approval of the Host Party. After finishing of project determination report, the PDD and Determination Report with CARs and CLs clarified except CAR 01 will be presented to National Environmental Investments Agency of Ukraine and Sponsor Party's NFP for receiving the Letter of Approval. Remaining CAR 01 will be closed after the issuance of the LoA by the Parties involved. Letter of Approval from the National Environmental Investments Agency of Ukraine and Letter of Approval from the sponsor party must be received. The evidence of the project approval by the Parties involved must be provided.</p>	<p>Table 2, Section A.5</p>
<p>2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur</p>	<p>Kyoto Protocol Article 6.1 (b)</p>	<p>OK</p>	<p>Table 2, Section B</p>



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
<p>3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7</p>	<p>Kyoto Protocol Article 6.1 (c)</p>	<p>Article 5 requires "...Annex I Parties to having in place, no later than 2007, national systems for the estimation of greenhouse gas emissions by sources and removals by sinks."</p> <p>Article 7 requires "... Annex I Parties to submit annual greenhouse gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol".</p> <p>Switzerland has submitted its Initial Report on 10 November 2006 (http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/initial_report_def_081106_.pdf) .</p>	
<p>4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3</p>	<p>Kyoto Protocol Article 6.1 (d)</p>	<p>OK</p>	
<p>5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of</p>	<p>Marrakech Accords, JI Modalities, §20</p>	<p>Ukraine has designated its Focal Point. National guidelines</p>	



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
JI projects		<p>and procedures for approving JI projects have been published.</p> <p>Contact data in Ukraine:</p> <p>National Environmental Investment Agency of Ukraine 35 Urytsky Str., Kyiv, P.O. 03035 Phone: +380 44 594 91 11 Fax: +380 44 5949115 Email: slorlenko@gmail.com</p> <p>Mr. Sergii Orlenko – Head</p> <p>Ukrainian national guidelines and procedures for the approval of JI projects are available (www.neia.gov.ua)</p>	
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol on 4 th February, 2004.	
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	<p>In the Initial Report submitted by Ukraine on 26 May 2006, the AAUs are quantified with:</p> <p>925 362 174.39 (x 5) = 4 626 810 872 tCO₂-e</p>	
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4	Marrakech Accords, JI Modalities, §21(d)/24	The designed system of the national registry has been described in the Initial Report	



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		mentioned above	
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination	Marrakech Accords, JI Modalities, §31	OK	
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments	Marrakech Accords, JI Modalities, §32	The PDD has been made publicly available through http://www.bureauveritas.com.ua/ website from August, 23 rd to September, 21 st 2010.	
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, JI Modalities, Appendix B	See CARs and CLs, table 2, section B below.	Table 2, Section B
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	See CARs and CLs, table 2, section D below.	Table 2, Section D
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	JISC “Modalities of communication of Project Participants with the JISC” Version 01, Clause A.3	The Ukrainian project participant will be authorised by the Host Party through the issuance of the approval for the project. Conclusion is pending a follow-up on CAR 01. Refer to Verifiers’ Note in 1 above.	Table 2, Section A



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Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1 Title of the project					
A.1.1. Is the title of the project activity presented?	1, 2, 4	DR	The title is presented. The title of the project is "Reconstruction of water supply and drainage system "Luganskvoda Ltd.".	OK	OK
A.1.2. Is the current version number of the document presented?	1, 2, 4	DR	The current version of the PDD is version 02 of October 04 th 2010.	OK	OK
A.1.3. Is the date when the document was completed presented?	1, 2, 4	DR	The date when the document was completed is 04 th of October 2010.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project activity included?	1, 2, 4	DR	The project is aimed at reduction of electric energy consumption by rehabilitation of centralized water supply system in Lugansk region, which includes replacement and rehabilitation of pumps and water distribution systems, as well as installation of frequency regulators and optimization of the technological process of water pumping.	OK	OK
A.2.2. Is it explained how the proposed project activity reduces greenhouse gas emissions?	1, 2, 4	DR	Due to reduction of electricity consumed by the water supply system from the power grid of Ukraine, the combustion of fossil fuel to produce the electric power in the grid will be reduced leading to GHG emission reduction. CAR 02. Please clearly state how the proposed activity reduces the GHG	CAR 02 CAR 03	OK OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			emission in the section A.2 of the PDD. CAR 03. Please include the information on baseline scenario in the section A.2 of the PDD as required by JISC guidelines for PDD users.		
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1, 2, 4,	DR	Yes, Ukraine (Host Party) and Switzerland are listed as Parties involved. Project participant of Ukraine is "Luganskvoda Ltd.", project participant of Switzerland is "VEMA S.A." CAR 04. Please make the name of the legal entity from Ukraine consistent throughout the PDD.	CAR 04	OK
A.3.2. Are project participants authorized by a Party involved?	1, 2, 4, 10	DR	Letter of Approval from was not received. See CAR 01.	Pending	OK
A.3.3. The data of the project participants are presented in tabular format?	1, 2, 4	DR	Yes, the data of the project participants are presented in tabular format.	OK	OK
A.3.4. Is contact information provided in annex 1 of the PDD?	1, 2, 4,	DR	The contact details for "Luganskvoda Ltd." And "VEMA S.A." are provided in the Annex 1 to the PDD.	OK	OK
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?	1, 2, 4, 10	DR	Ukraine is indicated as a Host Party.	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.1.1. Host Party(ies)	1, 2	DR	Ukraine is indicated as a Host Party.	OK	OK
A.4.1.2. Region/State/Province etc.	1, 2	DR	Lugansk region, Ukraine	OK	OK
A.4.1.3. City/Town/Community etc.	1, 2	DR	Lugansk city, towns and villages of Lugansk region	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	1, 2, 4	DR	The details of the physical location are provided in the section A.4.1.4 of the PDD. CL 01. Please clarify the organizational structure of the "Luganskvoda Ltd." in respect of number of separate subdivisions and their reorganization within project timeframes.	CL 01	OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1, 2, 4	DR	The design engineering of the project is based on proven technologies and reflects good practices. CAR 05. Please provide the information about measures to be implemented under the optimization of the technological process of water pumping in relevant section of the PDD. CAR 06. Please provide the information and characteristics of devices for concealed leakage detection, air valves, new groups of record keeping devices and frequency regulators implementation of which is envisaged by the project. CAR 07. Project implementation schedule	CAR 05 CAR 06 CAR 07 CL 02	OK OK OK OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			<p>presented in the table 2, section A.4.2 is not consistent with the information on project implementation measures stated in this section. Please provide the schedule in consistent and transparent manner. Please also state when the project implementation will be completed and the project will be fully operation.</p> <p>CL 02. Please clarify and provide the evidences on how is it ensured that the water distribution networks (pipelines) which are accounted in the project are replaced as a result of project activity but not as a part of maintenance routines (emergencies, planned repairs etc.)</p>		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1, 2, 4	DR	CL 03. Please clarify in the PDD if the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country.	CL 03	OK
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 2, 4	DR	The project technology is unlikely to be substituted by more efficient technology in the nearest 20-30 years.	OK	OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1, 2, 4	DR	Since the principal activities of «Luganskvoda Ltd.» don't change when introducing the JI project, special trainings for personnel are not necessary. Technical staff of the enterprise possesses necessary knowledge and experience for execution of project activities. CL 04. Please clarify if installation of new equipment and special measures envisaged by the project require maintenance efforts in order to work as presumed during the project period.	CL 04	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1, 2, 4	DR	See section A.4.2.4 of this table. The issue is pending on response to the CL 03 in A.4.2.4.	Pending	OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1, 2, 4	DR	Project activity, which includes rehabilitation of pumps, water distribution networks and installation of frequency regulators, will make it possible to increase power efficiency of water supply system in Lugansk region by reduction of electricity consumption from the power grid of Ukraine. This will reduce the combustion of traditional carbon organic fuel at power plants used to power generation and thus result in reduction of the CO2 emissions. CAR 08. Please provide the information on why the emission reduction would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances.	CAR 08	OK
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1, 2, 4	DR	The estimation of emission reductions over the crediting period is provided in the section A.4.3.1 of the PDD. CAR 09. The sums of annual emission reduction values in the tables 3 and 4, section A.4.3.1 and tables 12 and 13 in the section E, are incorrect. Please make appropriate amendments.	CAR 09	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO ₂ e?	1, 2, 4	DR	The annual emission reductions in tCO ₂ e are provided for the first commitment period and for the period after the first commitment period within project lifetime.	OK	OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?	1, 2, 4	DR	The data are presented for crediting and post-crediting period in tabular format. See	OK	OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			PDD tables 3 and 4, section A.4.3.1.		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	1, 2, 4, 6	DR	<p>The project received Letter of Endorsement No. 1221/23/7 of 18/08/2010 issued by National Environmental Investment Agency of Ukraine.</p> <p>Letter of Approval will be issued after the complete determination report is presented to the NFP (refer to CAR 01).</p> <p>CAR 10. Please use the JI terminology prescribed by the Glossary of JI terms regarding the entity performing determination (Accredited Independent Entity) and project approval (Letter of Approval).</p>	Pending CAR 10	OK OK
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1, 2, 4, 7, 8	DR	Yes, the chosen baseline is described. The JI specific approach is used for baseline setting.	OK	OK
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1, 2, 4, 7, 8	DR	The choice of the applicable baseline for the project category is sufficiently justified. Refer to section B.1 of the PDD.	OK	OK
B.1.3. Is it described how the methodology is applied in the context of the project?	1, 2, 4, 7, 8	DR	<p>The JI specific approach is used for description and justification of the baseline chosen.</p> <p>CAR 11. Please provide more detailed explanation of the reason for impossibility to apply the CDM approved methodology</p>	CAR 11 CAR 12 CAR 13	OK OK OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			AM0020. CAR 12. The table 5 does not provide the substantiation of the baseline scenario, the information containing in the table is irrelevant. Please correct. CAR 13. Please provide a description of the approach chosen for baseline setting in respect of deviations from AM0020 applied for the current project.		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1, 2, 4, 7, 8	DR	The basic assumptions of the baseline methodology in the context of the project activity are presented in the section B.1 and Annex 2 of the PDD. CL 05. Please clarify if any project activities were undertaken in the 2007 which is considered as baseline year. CL 06. Please provide value for baseline parameters defined ex-ante (volume of water supplied in the baseline year, amount of electricity used to supply water in the baseline year) in the section B.1 and Annex 2. Please also state the baseline year clearly.	CL 05 CL 06	OK OK
B.1.5. Is all literature and sources clearly referenced?	1, 2, 4, 7	DR	CAR 14. Please provide references to the information on water loss in distribution systems in the section B.1 of the PDD.	CAR 14	OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
B.2.1. Is the proposed project activity additional?	1, 2, 4, 7, 9	DR	CAR 15. In section B.2 of the PDD please provide the analysis of each alternative consistency with mandatory laws and regulations as required by Additionality Tool. CAR 16. No information regarding the expenses required for implementation of the project activity was provided as required by	CAR 15 CAR 16 CAR 17 CAR 18	OK OK OK OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			<p>Additionality Tool. Please provide the costs listing at least for the major components of the reconstruction program.</p> <p>CAR 17. Please clearly state the technological barriers that would prevent the implementation of the proposed project activity.</p> <p>CAR 18. Please provide a common practice analysis of any other activities that are operational and that are similar to the proposed project activity in Ukraine (other regional water supply systems).</p>		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
B.2.2. Is the baseline scenario described?	1, 2, 4, 7	DR	The baseline scenario is the continuation of the current situation without rehabilitation of the water distribution system. The baseline scenario is described in PDD sections A.2 and B.1.	OK	OK
B.2.3. Is the project scenario described?	1, 2, 4	DR	The project scenario is properly described in the sections A.4.2, A.4.3 of the PDD.	OK	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	1, 2, 4, 7, 10	DR	The analysis shows that the baseline emission would like exceed the project emission.	OK	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1, 2, 4, 7, 10	DR	Yes, it is clearly demonstrated that the project activity itself is not a likely baseline scenario. Refer to sections A.2. and B.2 of the PDD.	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1, 2, 4, 7	DR	CL 07. Please clarify if there are any obligatory state programs or policies prescribing the reconstruction of the water supply system in Lugansk region.	CL 07	OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	1, 2, 4, 7, 8	DR	The spatial boundaries of the project were defined. CAR 19. The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected.	CAR 19 CAR 20 CL 08 CL 09	OK OK OK OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			<p>Please provide the respective information.</p> <p>CAR 20. Please clearly state all emission sources and all gases attributable to the project.</p> <p>CL 08. Please clarify if the entire municipal water system or just water supply system is included in project boundaries.</p> <p>CL 09. Please clarify what is meant under direct and indirect outside and local emissions mentioned in the section B.3 of the PDD.</p>		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1, 2, 4, 7	DR	CAR 21. The date of baseline setting is incorrect as 2007 is used for baseline setting.	CAR 21	OK
B.4.2. Is the contact information provided?	1, 2, 4	DR	Yes, the baseline was developed by VEMA S.A. and "Luganskvoda Ltd." Contact information is provided in the section B.4 of the PDD.	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1, 2, 4	DR	It is indicated that VEMA S.A. and "Luganskvoda Ltd." are the project participants.	OK	OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?	1, 2, 4	DR	The starting date of the project is defined and stated in the PDD section C.1.	OK	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1, 2, 4	DR	The project's operation lifetime is defined as 20 years (240 months). CL 10. Please provide justification and respective evidences as to the expected operational lifetime of the project.	CL 10	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?	1, 2, 4	DR	The length of the crediting period for the first commitment period is 5 years (60 months) and 15 years after the 1 st commitment	CAR 22	OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			period. The starting date of the crediting period is 01/01/2008. CAR 22. Please indicate separately the length of the crediting for 1 st commitment period and period following the 1 st commitment period in the section C.3 of the PDD.		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1, 2, 4	DR	The monitoring plan is elaborated using JI specific approach based on CDM approved methodology AM0020. CAR 23. Please provide the detailed information on technical water losses and leaks inherent in water supply system (whether they are monitored by the enterprise, how they are considered in the current project etc., potential impact on the project emission reduction) with relevant supporting evidences.	CAR 23	OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1, 2, 4	DR	The Option 1 is used for monitoring of baseline and project emission reductions. Refer to section D.1.1 of the PDD.	OK	OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1, 2, 4	DR	Data to be collected in order to monitor emissions from the project are presented in the section D.1.1.1 in the PDD. CAR 24. Please include in the section D.1.1.1 the information on the emission factor for Ukrainian grid. CAR 25. Please include the information on each parameter archiving method (paper or electronic).	CAR 24 CAR 25	OK OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1, 2, 4	DR	Refer to section D.1.1.2 of the PDD. CAR 26. Please number all formulas throughout the PDD.	CAR 26 CAR 27 CAR 28	OK OK OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			<p>CAR 27. Please include the information on what is implied under system “i” in the sections D.1.1.2 and D.1.1.4 of the PDD (in description of the formulas used).</p> <p>CAR 28. Please provide all values of emission reductions in tonnes of CO2 equivalent throughout the whole PDD.</p>		



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	1, 2, 4	DR	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases within the project boundary are presented in the section D.1.1.3. in the PDD. CAR 29. Please include in the section D.1.1.3 the information on baseline parameters used for baseline emissions determination. Please also refer to CAR 25.	CAR 29	OK
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1, 2, 4	DR	See Section D.1.1.4. of the PDD Please refer to CAR 27 and CAR 28.	Pending	OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1, 2, 4	DR	CAR 30. The section D.1.2 (Option 2) is applicable only for direct emission reduction monitoring which is not the project case. Please remove the irrelevant information from the sections D.1.2.	CAR 30	OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1, 2, 4	DR	Not applicable.	OK	OK
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc,; emissions/emission reductions in units of CO2 equivalent).	1, 2, 4	DR	Not applicable.	OK	OK
D.1.10. If applicable, please describe the data and	1, 2,	DR	Refer to CAR 19	Pending	OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
information that will be collected in order to monitor leakage effects of the project.	4				
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).	1, 2, 4	DR	Refer to CAR 19	Pending	OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc,; emissions in units of CO2 equivalent).	1, 2, 4	DR	CAR 31. The section D.1.4 contains formulas for emission reduction calculation different from those described in the section D. Please make the information consistent.	CAR 31	OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1, 2, 4	DR, I	CAR 32. Please provide the information on collection and archiving of the project's environmental impact data in respect of the waste generated and water intake.	CAR 32	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1, 2, 4	DR, I	CAR 33. Taking into account CAR 32 please provide reference to the relevant host Party regulations	CAR 33	OK
D.1.15. If not applicable, is it stated so?	1, 2, 4	DR, I	Refer to D.1.13 and D.1.14 of this protocol.	OK	OK
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1, 2, 4	DR	Quality control and quality assurance procedures to be used in the monitoring of the measured data are established in the section D.2. of the PDD.	OK	OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project activity	1, 2, 4	DR	The project operational and management structure is described in details in Annex 3 of the PDD.	OK	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1, 2, 4	DR	The monitoring plan was established by VEMA S.A. and "Luganskvoda Ltd.", the contact details of both organizations are provided.	OK	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1, 2, 4	DR	It is indicated that VEMA S.A. and "Luganskvoda Ltd." are the project participants.	OK	OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due the project?	1, 2, 4	DR	The formulae used to estimate project emissions are described in the section D.1.1.2 of the PDD. CAR 34. Please provide the formulas used to estimate the project emissions in the section E.1 of the PDD, formulas for baseline emission estimation in section E.4.	CAR 34	OK
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula	1, 2, 4	DR	CAR 35. Please provide the detailed monthly project and baseline emissions and	CAR 35	OK

DETERMINATION REPORT

CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
specified in for the applicable project category?			emission reduction calculations for the whole crediting period from 2008 till 2027.		
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1, 2, 4	DR	<p>CAR 36. The table 9 in the section E.1 of the PDD in not transparent as for time period for which the data are provide, type of project activity, indicated amount of energy sources consumed etc. The non-transparency is observed as well in the tables 10 and 11 in the section E. Please correct.</p> <p>CAR 37. Please provide the information on conservative assumption used to calculate project GHG emission (also refer to CAR 34.)</p>	CAR 36 CAR 37	OK OK
E.2. Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?	1, 2, 4	DR	See CAR 19	Pending	OK
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?	1, 2, 4	DR	Refer to E.2.1 above.	Pending	OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1, 2, 4	DR	Refer to E.2.1 above.	Pending	OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1 and E.2 represent the project activity emissions?	1, 2, 4	DR	The calculated values of the sum of E.1 and E.2 represent the project emissions. The sum equals E.1 (refer to CAR 19). Refer to PDD Section E.3.	OK	OK
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the	1, 2,	DR	Refer to CAR 35.	Pending	OK



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	4				
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified in for the applicable project category?	1, 2, 4	DR	The results of the calculations are provided only for 2008-2012. Refer to CAR 36.	Pending	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1, 2, 4	DR	Conservative assumptions were made.	OK	OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1, 2, 4	DR	CAR 38. The amount of emission reductions presented in the section E.5 does not agree with project and baseline emission indicated earlier in the section E and other section of the PDD. Please state the difference between E.4 and E.3 which represent the emission reductions due to the project during a given period.	CAR 38	OK
E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO ₂ abated?	1, 2, 4	DR	The table is presented in section E.6 of the PDD. Please refer to CAR 09.	Pending	OK
F. Environmental Impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					



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CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1, 2, 4	DR, I	<p>The environmental impacts of the project were not sufficiently described.</p> <p>CAR 39. During site-visit it was observed that no Environmental Impact Assessment (EIA) regarding the given project was undertaken (as according to the Ukrainian legislation the project activities are not subject to EIA), however the section F of the PDD contain the information concerning project's EIA. Please explain and correct accordingly. Please also provide a summary of project environmental impact analysis regarding other aspects than reduction of CO₂ emissions.</p> <p>CL 11. Please provide for review the list of permits and permitting documentation which were provided by the Host party and regulate all environmental aspects of the project (in applicable).</p>	CAR 39 CL 11	OK OK
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?	1, 2, 4	DR, I	<p>The EIA of the project is fulfilled on the stage of the project documentation elaboration in compliance with the requirements of the environmental legislation of Ukraine:</p> <ul style="list-style-type: none"> - The Ukrainian Low "Environmental protection" from 25.06.91 # 1264-XII. - DBN A.2.2-1-2003 "Contents and structure of materials for assessment of environmental impact in the course of projecting and building of enterprises, 	OK	OK



DETERMINATION REPORT

CHECKLIST QUESTION	Ref	MoV*	COMMENTS	Draft Concl	Final Concl
			houses and constructions" approved by order of Derzhbud of Ukraine of 15.12.2003 # 214 and implemented since 01.04.2004. According to the Ukrainian legislation it is not required to perform EIA of the project at hand.		
F.1.3. Are the requirements of the National Focal Point being met?	1, 2, 3, 4	DR, I	The National Focal Point issued Letter of Endorsement for the project.	OK	OK
F.1.4. Will the project create any adverse environmental effects?	1, 2, 4	DR, I	Adverse environmental effects are not expected.	OK	OK
F.1.5. Are transboundary environmental considered in the analysis?	1, 2, 4	DR, I	CL 12. Please provide the information on transboundary effects of the project.	CL 12	OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1, 2, 4	DR, I	Yes, identified environmental impacts have been addressed in the project design.	OK	OK
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1, 2, 4	DR	CL 13. Please provide the evidence of publication in the newspaper regarding project implementation and absence of comments from stakeholders.	CL 13	OK
G.1.2. The nature of comments is provided?	1, 2, 4	DR	See G.1.1 above.	OK	OK
G.1.3. Has due account been taken of any stakeholder comments received?	1, 2, 4	DR	See G.1.1 above.	OK	OK



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Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	1,2,4	DR, I	CL 14. Please clarify if the project activity is licensed by the competent authority.	CL 14	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1,2,4	DR, I	No special conditions were identified.	OK	OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1,2,4	DR, I	Yes, the project is in lines with relevant legislation and plans in the Ukraine.	OK	OK



DETERMINATION REPORT

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
CAR 01. The project has no approval of the Host Party.	Table 1, checklist question 1	The Letter of Approval by the Host Party will be received after successfully determination of the Project. This is in accordance with Ukrainian Legislation (Order Nr. 718, dated 10 August 2008. On Approval of the Procedure of Drafting, Review, Approval and Implementation of Projects Aimed at Reduction of Anthropogenic Emissions of Greenhouse Gases; Order Nr. 33, dated June 25, 2008. On approval of Requirements to preparation of the joint implementation projects).	The conclusion is pending the approval by the Host Party.
CAR 02. Please clearly state how the proposed activity reduces the GHG emission in the section A.2 of the PDD.	Table 2, checklist question A.2.2	Corrected See section A.2. Due to reduction of electricity consumed by the water supply system from the power grid of Ukraine, the combustion of fossil fuel to produce the electric power in the grid will be reduced leading to GHG emission reduction.	The issue is closed based on appropriate information provided.
CAR 03. Please include the information on baseline scenario in the section A.2 of the PDD as required by JISC guidelines for PDD users.	Table 2, checklist question A.2.2	Information included See section A.2. Baseline scenario identified is continuation of current situation ("business as usual")	The required information was provided. The issue is closed.
CAR 04. Please make the name of the legal entity from Ukraine consistent throughout the PDD.	Table 2, checklist question	Corrected. The name of the legal entity from host party is "Luganskvoda Ltd."	The corrections are found appropriate. The issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
	A.3.1		
<p>CAR 05. Please provide the information about measures to be implemented under the optimization of the technological process of water pumping in relevant section of the PDD.</p>	Table 2, checklist question A.4.2.1	Corrected. See section A.4.2. More detailed information under optimization of the technological process of water pumping was provided. Optimization of the technological process of water pumping will be conducted, i.e. at some areas the water will be supplied directly to the consumers, passing the reservoirs. There will be transfer of load from pumping plants with old equipment to the pumping stations fitted with high-performance equipment.	The information provided was analysed and found to be sufficient. The issue is closed.
<p>CAR 06. Please provide the information and characteristics of devices for concealed leakage detection, air valves, new groups of record keeping devices and frequency regulators implementation of which is envisaged by the project.</p>	Table 2, checklist question A.4.2.1	The characteristic of major equipment which is to be installed under the project is provided in the section A.4.2 of the PDD.	The provided information was reviewed and found adequate. The issue is closed based on due amendments made to the 1 st version of the PDD.
<p>CAR 07. Project implementation schedule presented in the table 2, section A.4.2 is not consistent with the information on project implementation measures stated in this section. Please provide the schedule in consistent and transparent manner. Please also state when the project implementation will be completed and the project will be fully operation.</p>	Table 2, checklist question A.4.2.1	Corrected. See section A.4.2. The project activity implementation schedule now incorporates all measures which are envisaged under the given project. 31/12/2011 is the final date of project arrangements implementation.	The issue is closed based on due information and appropriate correction provided to the 1st version of the PDD.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
CAR 08. Please provide the information on why the emission reduction would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances.	Table 2, checklist question A.4.3.1	Corrected See section A.4.3. According to the Ukrainian Law "On drinking water and drinking water supply"1 business activity in the sphere of drinking water supply to the consumers shall be licensed. There are no legislative document committing the water supplying company "Luganskvoda Ltd." to modernize pumping equipment and water distribution networks.	The PDD ver.02 was reviewed. The provided information was found appropriate. The issue is closed.
CAR 09. The sums of annual emission reduction values in the tables 3 and 4, section A.4.3.1 and tables 12 and 13 in the section E, are incorrect. Please make appropriate amendments.	Table 2, checklist question A.4.3.2	Corrected. See section A.4.3.1. In the PDD ver. 02 the sums of annual emission reductions are consistent.	The issue is closed based on due corrections made to the 1 st version of the PDD.
CAR 10. Please use the JI terminology prescribed by the Glossary of JI terms regarding the entity performing determination (Accredited Independent Entity) and project approval (Letter of Approval).	Table 2, checklist question A.5.1	Corrected. See section A.4.5. The PDD ver.02 strictly follows the terminology specified in JI documents.	The issue is closed based on due amendments made to the 1 st version of the PDD.
CAR 11. Please provide more detailed explanation of the reason for impossibility to apply the CDM approved methodology AM0020.	Table 2, checklist question B.1.3	The required information was provided under section B.1 of the PDD ver.02.	The explanation of impossibility of AM0020 application to the current project was found adequate. The issue is closed based on justifications and corrections to the PDD provided.
CAR 12. The table 5 does not provide the substantiation of the baseline scenario, the information containing in the table is	Table 2, checklist question	Corrected See section B.1.	The corrected PDD was reviewed. The issue is closed based on due amendments



DETERMINATION REPORT

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
irrelevant. Please correct.	B.1.3		made.
<p>CAR 13. Please provide a description of the approach chosen for baseline setting in respect of deviations from AM0020 applied for the current project.</p>	Table 2, checklist question B.1.3	<p>Corrected See section B.1. It is impossible to apply Methodology AM0020 since the formulas for preliminary estimation of project emission reductions include exact values of electric energy consumption and volumes of water supplied to the system. In our case it is impossible to state necessary quantity of electric energy for water pumping to the consumer in project year. Specific approach based on efficiency factor of pumping equipment and water leakage within the water supply network is applied to improve accuracy of preliminary calculations.</p>	The issue is closed based on appropriate information regarding baseline setting approach provided in the section B.1.
<p>CAR 14. Please provide references to the information on water loss in distribution systems in the section B.1 of the PDD.</p>	Table 2, checklist question B.1.5	<p>Information included, See section B.1. There are two types of water leakage at «Luganskvoda Ltd.»: productive and nonproductive; real practice of water-supply network exploitation in Ukraine. Such losses include own needs of water supply company (water loss for preventive maintenance of water supply networks, disinfection and washing of technological constructions and leakage therefrom, etc.). The main component of water loss is water leakage from water supply</p>	The references provided on water loss in distribution system and description of water leaks was found sufficient. The issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		<p>network. The company is obliged to make annually theoretical (calculation in accordance with the “Methodology of branch technological standards of drinking water use at the companies of water supply and drainage industry of Ukraine”³) and actual calculation of water loss from water-supply network. Results of calculations in reporting form³ shall be submitted to the State committee of water industry of Ukraine⁴. Available distribution networks of “Luganskvoda Ltd.” are characterized by averaged losses from 40 to 50%.</p>	
<p>CAR 15. In section B.2 of the PDD please provide the analysis of each alternative consistency with mandatory laws and regulations as required by Additionality Tool.</p>	<p>Table 2, checklist question B.2.1</p>	<p>Analysis has been provided See section B.2. Variant 2: Rehabilitation without JI mechanisms application shall be consistent with statutory laws and decrees; detailed information about analysis of conformity with the legislation was elaborated for Variant 1, similar to the conformity with statutory laws and decrees of Variant 2. Variant 3: Rehabilitation without JI mechanisms application and exclusion of any non-key arrangements from the project shall be consistent with statutory laws and decrees; detailed information about analysis of conformity with the legislation was elaborated</p>	<p>The issue is closed based on appropriate information and correction made to the 1st version of the PDD.</p>



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		for Variant 1, similar to the conformity with statutory laws and decrees of Variant 2.	
<p>CAR 16. No information regarding the expenses required for implementation of the project activity was provided as required by Additionality Tool. Please provide the costs listing at least for the major components of the reconstruction program.</p>	Table 2, checklist question B.2.1	<p>Information included See section B.2.</p> <ul style="list-style-type: none"> - Expenses for materials for pumps rehabilitation (stuffing boxes, shaft, rotor), 1050954 Euro; - Cost of pump replacement works, 613540 Euro; - Consulting, personnel training, other actions, 406000 Euro; - Other expenses, 102000 Euro. <p>In total 2172494 Euro will be spent for the project.</p>	<p>The analysis provided in the section B.2 of the PDD was reviewed and found appropriate. The issue is closed based on due amendment made to the PDD.</p>
<p>CAR 17. Please clearly state the technological barriers that would prevent the implementation of the proposed project activity.</p>	Table 2, checklist question B.2.1	<p>Corrected, See section B.2. Due to financial problems recently the repair works were not conducted to the full extent and provided for mainly maintenance of the equipment, often without taking into consideration saving results. At the same time many junctions of the equipment are to be replaced. Implementation of Z22 pumps is unique technology for Ukraine With a view to complexity of such technology the qualification of pump maintenance personnel may be insufficient. In order to overcome such obstacle training of such</p>	<p>The information on technological barrier was checked and found is adequate. The issue is closed.</p>



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		employees is necessary.	
<p>CAR 18. Please provide a common practice analysis of any other activities that are operational and that are similar to the proposed project activity in Ukraine (other regional water supply systems).</p>	<p>Table 2, checklist question B.2.1</p>	<p>Analysis has been provided See section B.2. Analysis of project activity similarity demonstrated absence of similar projects in Ukraine. Absence of financial incentives, described for Step 2 and barriers of Step 3, concern not only "Luganskvoda Ltd.", but also other companies operating water-distribution networks in Ukraine. In this respect existing practice of equipment maintenance represented in the variant of basic conditions chosen for this Project is customary for Ukraine. Due to current practice all losses of electric energy shall be borne by end consumers; and the companies engaged in water supply don't have incentives for energy effective projects implementation. As a whole the same pumping equipment and water-distribution networks are used in Ukraine as in Lugansk region.</p>	<p>The issue is closed based on due common practise analysis presented in the PDD ver. 02.</p>
<p>CAR 19. The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected. Please provide the respective information.</p>	<p>Table 2, checklist question B.3.1</p>	<p>Information provided, See section B.3. There is not leakage associated in the given project.</p>	<p>The issue is closed based on due amendment made to the 1st version of PDD.</p>



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
CAR 20. Please clearly state all emission sources and all gases attributable to the project.	Table 2, checklist question B.3.1	Corrected, See section B.3. Table demonstrates review of all sources of emissions under the baseline and project scenarios.	The issue is closed based on appropriate information presented in the PDD ver.02.
CAR 21. The date of baseline setting is incorrect as 2007 is used for baseline setting.	Table 2, checklist question B.4.1	Corrected See section B.4. Date of baseline determination: 30/09/2010	The required correction was made. The issue is closed.
CAR 22. Please indicate separately the length of the crediting for 1 st commitment period and period following the 1 st commitment period in the section C.3 of the PDD.	Table 2, checklist question C.3.1	Corrected See section C.3. If after the first period of commitments under Kyoto Protocol its validity is prolonged, crediting period under the project will be prolonged by 15 years/180 months (January 01, 2013-December 31, 2027).	The issue is closed based on presented detailed information on project's crediting period.
CAR 23. Please provide the detailed information on technical water losses and leaks inherent in water supply system (whether they are monitored by the enterprise, how they are considered in the current project etc., potential impact on the project emission reduction) with relevant supporting evidences.	Table 2, checklist question D.1.1	Information provided, See section A.4.2. See also CAR 14.	The information on water losses in the water supply system was found sufficient. The issue is closed.
CAR 24. Please include in the section D.1.1.1 the information on the emission factor for Ukrainian grid.	Table 2, checklist question D.1.3	The required information was included. See section D.1.1.1.	The issue is closed based on correction made to the PDD.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
CAR 25. Please include the information on each parameter archiving method (paper or electronic).	Table 2, checklist question D.1.3	Corrected, See section D.1.1.1. The parameters archiving method was indicated in the tables containing description of the respective parameters.	The issue is closed based on due supplemental information provided in the section D.1.1.1 of the PDD.
CAR 26. Please number all formulas throughout the PDD.	Table 2, checklist question D.1.4	All formulas were numbered. See PDD ver.02.	The issue is closed based on due amendments made to the 1 st version of the PDD.
CAR 27. Please include the information on what is implied under system “i” in the sections D.1.1.2 and D.1.1.4 of the PDD (in description of the formulas used).	Table 2, checklist question D.1.4	Information provided See section D.1.1.1. [i] index – independent water-supply network;	The required information was added. The issue is closed.
CAR 28. Please provide all values of emission reductions in tonnes of CO2 equivalent throughout the whole PDD.	Table 2, checklist question D.1.4	Corrected. All values of emission reduction are given in tonnes of CO2 equivalent.	The issue is closed based on due corrections made to the 1 st version of the PDD.
CAR 29. Please include in the section D.1.1.3 the information on baseline parameters used for baseline emissions determination. Please also refer to CAR 25.	Table 2, checklist question D.1.5	Description of baseline parameters were presented in the section D.1.1.3 of the PDD ver.02.	The issue is closed based on sufficient information as to baseline parameters presented in the PDD ver.02.
CAR 30. The section D.1.2 (Option 2) is applicable only for direct emission reduction monitoring which is not the project case. Please remove the irrelevant information from	Table 2, checklist question	Corrected. See section D.1.2.	The appropriate corrections were made. The issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
the sections D.1.2.	D.1.7		
CAR 31. The section D.1.4 contains formulas for emission reduction calculation different from those described in the section D. Please make the information consistent.	Table 2, checklist question D.1.12	The formulas in section D.1.4 of the PDD ver.01 present the calculation method used for ex-ante estimation of emission reduction. The description of ex-ante calculation is now moved to section E. See section D.1.4 and E.	The corrections provided are sufficient. The issue is closed.
CAR 32. Please provide the information on collection and archiving of the project's environmental impact data in respect of the waste generated and water intake.	Table 2, checklist question D.1.13	Information provided See section D.1.5. Implementation of this Project provides for replacement of pumping equipment and water distribution networks; the "Deficiency acts" ¹¹ will be executed for the equipment to be put out of operation (pumps, electric motors, steel pipes); dismantled equipment will be delivered to Lugansk Regional Council for subsequent application as secondary materials. In accordance with Ukrainian legislation "On system of collecting, sorting, transportation, processing and utilization of used tare (package) and solid domestic waste" ¹¹ the company doesn't monitor utilization of solid domestic wastes".	The section D.1.5 of the PDD ver.02 was checked and found adequate. The issue is closed.
CAR 33. Taking into account CAR 32 please provide reference to the relevant host Party regulations	Table 2, checklist question D.1.14	References are provided See section D.1.5.	The issue is closed base on due corrections made.
CAR 34. Please provide the formulas used to	Table 2,	The formulas for ex-ante emission reduction	The GHG emission ex-ante



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
estimate the project emissions in the section E.1 of the PDD, formulas for baseline emission estimation in section E.4.	checklist question E.1.1	calculations are presented and described in the section E.1 and E.4 of the PDD ver.02.	calculation method was reviewed and found appropriate. The issue is closed based on provided information and amendments made to the 1 st version of PDD.
CAR 35. Please provide the detailed monthly project and baseline emissions and emission reduction calculations for the whole crediting period from 2008 till 2027.	Table 2, checklist question E.1.2	The calculation result for 2008-2027 were included into section E of the PDD, detailed information is presented in the Accompanying documents 1, 2, 3.	The PDD section E together with detailed calculation spreadsheets in Accompanying documents 1, 2, 3 were checked and found appropriate. The issue is closed.
CAR 36. The table 9 in the section E.1 of the PDD in not transparent as for time period for which the data are provide, type of project activity, indicated amount of energy sources consumed etc. The non-transparency is observed as well in the tables 10 and 11 in the section E. Please correct.	Table 2, checklist question E.1.3	The irrelevant information was deleted from the section E. See section E.1 of the PDD ver.02.	The issue is closed based on due corrections made to the 1 st version of the PDD.
CAR 37. Please provide the information on assumptions made to calculate project GHG emission (also refer to CAR 34.)	Table 2, checklist question E.1.3	Information provided See section E.1. Pb – total amount of electric energy necessary for water supply to the consumers in basic year, kWt*hour (with the view of conservatism principle, basic quantity of electric energy for project year will be the same as in 2007).	The assumption made for x-ante calculation of emission reductions and calculations per se were checked and found conservative. The issue is closed.
CAR 38. The amount of emission reductions	Table 2,	The inadequate information was corrected. See	The issue is closed based on due



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
presented in the section E.5 does not agree with project and baseline emission indicated earlier in the section E and other section of the PDD. Please state the difference between E.4 and E.3 which represent the emission reductions due to the project during a given period.	checklist question E.5.1	section E.1., E.4., E.3.	amendments made to the 1 st version of the PDD.
CAR 39. During site-visit it was observed that no Environmental Impact Assessment (EIA) regarding the given project was undertaken (as according to the Ukrainian legislation the project activities are not subject to EIA), however the section F of the PDD contain the information concerning project's EIA. Please explain and correct accordingly. Please also provide a summary of project environmental impact analysis regarding other aspects than reduction of CO ₂ emissions.	Table 2, checklist question F.1.1	The Environmental Impact Assessment which was mentioned in the section F.1 of the PDD ver.01 concerns other activities of "Luganskvoda Ltd.", namely construction of underground waters wells, but not the current project activity. No EIA for the project at hand was performed as it is required by Ukrainian legislation for the current project type. The information in the section F was corrected accordingly , see PDD ver.02	The provided information was found appropriate. The issue is closed based on due corrections made to the 1 st version of the PDD.
CL 01. Please clarify the organizational structure of the "Luganskvoda Ltd." in respect of number of separate subdivisions and their reorganization within project timeframes.	Table 2, checklist question A.4.1.4	By organization structure "Luganskvoda Ltd." is divided into 19 separate divisions: 6 administrations and 13 departments. 01/10/2006 Separate subdivision "Lutuginsky Department" and separate subdivision "St. Lugansk Department" are united and included into separate subdivision "Southern Administration. The information under section	The clarification provided and correction made to the PDD were checked and found appropriate. The issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		A.4.1.1 of the PDD was supplemented.	
<p>CL 02. Please clarify and provide the evidences on how is it ensured that the water distribution networks (pipelines) which are accounted in the project are replaced as a result of project activity but not as a part of maintenance routines (emergencies, planned repairs etc.)</p>	Table 2, checklist question A.4.2.1	<p>Information provided See section A.4.2. “Luganskvoda Ltd.” makes annual calculations of water leakage within the network. Based on such calculations, it determines planned replacements. If the water losses at site don’t exceed standard water loss, the company is not obliged to make planned replacement of the pipeline. Pipelines to be replaced as a result of project implementation are not the part of technological maintenance (emergency situations, planned replacements). Pipeline replacement is conducted at sites, which don’t exceed planned water loss yet, but are in poor condition.</p>	The clarification is accepted. The issue is closed based on sufficient information provided.
<p>CL 03. Please clarify in the PDD if the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country.</p>	Table 2, checklist question A.4.2.2	<p>Information provided, see section A.4.2. Technologies to be realized by the project are already proven and state-of-the-art in the sphere of water supply and water discharge. They will result into significantly better productivity.</p>	The clarification is found appropriate. The issue is closed.
<p>CL 04. Please clarify if installation of new equipment and special measures envisaged by the project require maintenance efforts in order to work as presumed during the project period.</p>	Table 2, checklist question A.4.2.4	No special additional maintenance efforts are needed. See section A.4.2 for more detailed information.	The clarification is accepted. The issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
CL 05. Please clarify if any project activities were undertaken in the 2007 which is considered as baseline year.	Table 2, checklist question B.1.4	Despite of the fact that some project measures were started at the end of 2007 this year was considered as baseline year which is conservative. See section B.1.	The clarification is accepted. The issue is closed.
CL 06. Please provide value for baseline parameters defined ex-ante (volume of water supplied in the baseline year, amount of electricity used to supply water in the baseline year) in the section B.1 and Annex 2. Please also state the baseline year clearly.	Table 2, checklist question B.1.4	The historical values for baseline parameters were provided in the section B.1 and Annex 2 of the PDD.	The values of ex-ante determined baseline parameters were presented as required. The issue is closed.
CL 07. Please clarify if there are any obligatory state programs or policies prescribing the reconstruction of the water supply system in Lugansk region.	Table 2, checklist question B.2.6	The program "Water of Luhansk region" was developed by the Regional Council in 2004. The program included a water system modernization. But due to the lack of finance the program was not implemented. Nevertheless, after six years the program "Water of Luhansk region" is still relevant. However, the allocation of funds is not expected for project realization.	The clarification provided is found adequate. The issue is closed.
CL 08. Please clarify if the entire municipal water system or just water supply system is included in project boundaries.	Table 2, checklist question B.3.1	Information provided See section B.3. The whole water-supply network of "Luganskvoda Ltd." is involved into the project, but the water drainage system is not included into the project.	The corrected PDD was reviewed. The clarification is accepted. The issue is closed.
CL 09. Please clarify what is meant under direct and indirect outside and local	Table 2, checklist	The information on emission sources under the section B.3 of the PDD was modified.	The issue is closed based on due amendments made to the 1 st



DETERMINATION REPORT

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
emissions mentioned in the section B.3 of the PDD.	question B.3.1	Inappropriate information was removed of the section. See PDD ver.02.	version of the PDD.
CL 10. Please provide justification and respective evidences as to the expected operational lifetime of the project.	Table 2, checklist question C.2.1	The evidences were provided (justification regarding equipment operational time from the equipment supplier and equipment passports).	The justification is accepted. The supporting documentation confirming equipment lifetime was reviewed. The issue is closed.
CL 11. Please provide for review the list of permits and permitting documentation which were provided by the Host party and regulate all environmental aspects of the project (in applicable).	Table 2, checklist question F.1.1	The respective information was provided under the section F.1.	The issue is closed based on clarification provided in the section F of the PDD ver.02.
CL 12. Please provide the information on transboundary effects of the project.	Table 2, checklist question F.1.5	Information provided See section F.1. There will be no transboundary impacts of project activity in accordance with their determination in the text of "Convention on Long-range Transboundary Pollution" ratified by Ukraine.	The clarification is accepted. The issue is closed.
CL 13. Please provide the evidence of publication in the newspaper regarding project implementation and absence of comments from stakeholders.	Table 2, checklist question G.1.1	The inappropriate information was given by mistake in the section G. The information was corrected, see section G.1.	The clarification in accepted. The modified PDD ver.02 was checked. The issue is closed.
CL 14. Please clarify if the project activity is licensed by the competent authority.	Table 4, checklist question 1.1	The Information is provided under the section F.1.	The modified PDD ver. 02 was reviewed. The information in section F was found sufficient. The issue is closed.



APPENDIX B: VERIFIERS CV'S

Work carried out by:

Oleg Skoblyk, Specialist (Power Management)

Team Leader, Climate Change Lead Verifier
Bureau Veritas Ukraine Health, Safety and Environmental Department
Project Manager

Oleg Skoblyk has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University' with specialty Power Management. He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Oleg Skoblyk has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 19 JI projects.

Denis Pishchalov (economics)

Team member, Financial Specialist
Bureau Veritas Ukraine Specialist in economics

Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

The determination report was reviewed by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Internal Technical Reviewer, Climate Change Lead Verifier
Bureau Veritas Ukraine Acting Chief Executive



Mr. Sokolov has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Cours and he was involved in the determination/verification over 60 JI/CDM projects.