DETERMINATION REPORT
PRJSC LINIK

DETERMINATION OF THE
IMPLEMENTATION OF ENERGY SAVING MEASURES AT
PRJSC LINIK, UKRAINE

BUREAU VERITAS CERTIFICATION

REPORT NO. UKRAINE-DET/0476/2012

REVISION NO. 02

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Client: PRJSC LINIK	Client ref.: Mr Maxim Grekov

Summary:

Bureau Veritas Certification has made the determination of the "Implementation of energy saving measures at PRJSC LINIK, Ukraine" project of Private Joint Stock Company "Lisichansk Oil Investments Company" (hereafter called PRJSC "LINIK") located in Luhansk region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

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

Report No.: UKRAINE- det/0476/2012	Subject Group: JI
Project title: "Implementation of energy saving measures at PRJSC LINIK, Ukraine"	
Work carried out by: Svitlana Gariyenchyk – Team Leader, Lead Verifier Vladimir Kulish – Team Member, Verifier Denis Pishchalov – Team Member, Financial Specialist Sergyi Kustovskiy – Team Member, Technical Specialist	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer Vladimir Gumeniuk – Technical Specialist	
Work approved by: Ivan Sokolov - Operational Manager	
Date of this revision: 16/10/2012	Rev. No.: 02 / Number of pages: 69

Bureau Veritas Certification Holding SAS

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1 INTRODUCTION

PRJSC LINIK has commissioned Bureau Veritas Certification to determine its JI project “Implementation of energy saving measures at PRJSC LINIK, Ukraine” project of (hereafter called “the project”) in Luhansk 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 Determination team

The determination team consists of the following personnel:

Svitlana Gariyenchyk
Team Leader, Bureau Veritas Certification, Climate Change Verifier

Vladimir Kulish

Team Member, Bureau Veritas Certification Climate Change Verifier

Denis Pishchalov

Team Member, Bureau Veritas Certification Financial Specialist

Sergyi Kustovskiy

Team Member, Bureau Veritas Certification Technical Specialist

This determination report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification Internal reviewer

Vladimir Gumeniuk
Bureau Veritas Certification Technical Specialist

2 METHODOLOGY

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

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

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

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

2.1 Review of Documents

The Project Design Document (PDD) “Implementation of energy saving measures at PRJSC LINIK, Ukraine” version 1.0 dated 06/04/2012 submitted by PRJSC LINIK and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, PRJSC LINIK revised the PDD and resubmitted it on 13/06/2012 as version 2.0.
To address Bureau Veritas Certification corrective action and clarification requests issued after internal technical review, PRJSC LINIK revised the PDD and resubmitted it on 04/07/2012 as version 2.1.
After the Letter of Endorsement from Ukrainian DFP had been issued for the Project, the Project Proponents resubmitted the PDD as version 2.2. dated 15/10/2012 that is deemed final.

The determination findings presented in this report relate to the project as described in the PDD version 2.2.

2.2 Follow-up Interviews

On 12/04/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of PRJSC LINIK and Global Carbon B.V. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PRJSC LINIK	➢ Implementation schedule ➢ Project management organisation ➢ Environmental Impact Assessment ➢ Project monitoring responsibilities ➢ Measurement equipment ➢ Quality control and quality assurance procedures ➢ Environmental impacts affected ➢ Local authorities and public opinion
CONSULTANT Global Carbon B.V.	➢ Applicability of methodology ➢ Baseline and Project scenarios ➢ Additionality justification ➢ Common practice analysis ➢ Monitoring plan ➢ Conformity of PDD to JI requirements

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.

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

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

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

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

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

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

3 PROJECT DESCRIPTION

The project under consideration is aimed at achieving GHG emission reductions by decreasing energy resources consumption and includes the following sub-projects:

Sub-project 1. Construction of Pressure Swing Adsorption Unit for hydrogen production

Hydrogen is one of the main intermediate products largely utilized in oil and petrochemical industries. In the baseline scenario it is assumed that hydrogen will continue to be produced by Steam Methane Reforming process with emitting greenhouse gases (GHG) into the atmosphere. Whereas using the improved technology proposed by this project, the hydrogen will be extracted from the off-gases and used to for the refining processes at site. With this purpose the Pressure Swing Adsorption Unit

for hydrogen production as part of Steam Methane Reforming Plant will be installed at LINIK.

Therefore, in the project scenario the hydrogen extracted from the off-gases will partly substitute the hydrogen from Steam Methane Reforming process and reduce GHG emissions.

Sub-project 2. Reconstruction of AK-1.5 units at Nitrogen-Oxygen Plant

Nitrogen has long been used in the refineries for a number of processes including inerting, blanketing, and purging with refineries where it is used to suppress flammability by reducing oxygen levels to a point below which combustion is possible.

In the baseline scenario it is assumed that nitrogen will continue to be produced by A-8-1 Unit with emitting GHG into the atmosphere due to electricity consumption. Modernization and the use of two AK 1.5 Units at Nitrogen-Oxygen Plant proposed under the project scenario will allow to reduce electricity consumption and, thus, significantly reduce GHG emissions into the atmosphere. A-8-1 unit that is currently being operated will be used periodically to cover additional needs of the enterprise in nitrogen during repair of facilities, completion of repair to perform a pressure test of equipment.

The in-depth description of the technologies to be employed, or measures, operations or actions to be implemented by the project is provided in Section A.4.2. of the PDD.

The identified areas of concern as to the project description, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CL 03, CL 04, CAR 06, CAR 07, CAR 03, CAR 04, CAR 08).

4 DETERMINATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 12 Corrective Action Requests and 10 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

The project has no approval by the Host Party.
The project obtained the Letter of Endorsement #2585/23/7dated 14/09/2012 from the State Environmental Investment Agency of Ukraine.
After finishing JI project determination report, the PDD and Determination Report will be presented to the State Environmental Investments Agency of Ukraine (SEIA) for receiving the Letter of Approval (LoA).
The State of the Netherlands acting through the Ministry of Economic Affairs, Agriculture and Innovation and its implementing agency "NL Agency" being the Designated Focal Point for Joint Implementation in the Netherlands issued the Letter of Approval Ref 2012JI31 dated 02/07/2012 for the project.

The identified areas of concern as to project approvals by Parties involved, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 01).

4.2 Authorization of project participants by Parties involved (21)

The project has no approval by the Host Party. 9refer to CAR01 (Appendix A, Table 2).
The State of the Netherlands acting through the Ministry of Economic Affairs, Agriculture and Innovation and its implementing agency "NL Agency" being the Designated Focal Point for Joint Implementation in the Netherlands authorized Global Carbon B.V., being a legal entity, to participate in the Project for the purpose of Kyoto Protocol.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that that a baseline for the JI project is set in accordance with Appendix B to decision 9/CMP.1 (JI guidelines), and with further Guidance on Criteria for Baseline Setting and Monitoring (version 03) (hereinafter referred to as Guidance).

The baseline scenario has been established according to the criteria outlined in the Guidance:

1) The baseline covers emissions from all gases, sectors and source categories within the project boundary that are listed in Section B.3 of the PDD;

2) The baseline is established on a project specific basis using the JI-specific approach;

3) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors.
All parameters and data are either monitored by the project participants or

are taken from sources that provide a verifiable reference for each parameter.

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

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible ones:

For both sub-projects the continuation of the current situation was chosen as the most plausible baseline scenarios:

For Subproject 1 - *Construction of the Pressure Swing Adsorption Unit for hydrogen production* - this scenario foresees continuation of hydrogen production by Steam Methane Reforming. Off-gases are released in the atmosphere.

For Subproject 2 - *Reconstruction of AK-1.5 units at Nitrogen-Oxygen Plant* - A-8-1 unit continues its operation. The unit is in a workable condition and completely satisfies plant's demand in nitrogen. Only periodic maintenance without any modernization activities is being carried out on them. The unit works in a full capacity mode without regulation ability causing overproduction of nitrogen that is released in the atmosphere. AK 1.5 units don't undergo any modernization activities.

(b) Taking into account relevant national policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. In this context, the following key factors that affect a baseline are taken into account:

- A comprehensive analysis and an in-depth description of the reform policies and legislation concerning the development and reforming of the Ukrainian industry, such as the State program that foresees the multi staged industry development until 2017 that contains neither incentives to provide financial support nor the definite stimulus for implementing sectoral reform initiatives on the part of the Ukrainian government and thus doesn't oblige the Ukrainian enterprises to implement energy efficient measures;
- Describing economic situation the project participants state that there are standardized types of products existing in the market of such refined oil products as fuel oil, lubricants and chemicals. The amount of the manufactured goods depends on management

and marketing activities of an enterprise and cannot be influenced by the proposed project.

- As far as availability of capital there is a summary of key indicators of business practices in Ukraine as well as a comparison country risk premiums for Russia and Ukraine provided by the PP's vividly demonstrating that Ukraine has been always considered a high-risk country for investments and doing business, which extremely limits the opportunities of the project as for its access to financial resources at the international level.
- It is stated by the project participants that modern technologies and best practices existing in the developed countries are unavailable due to their high cost and necessity of the knowledgeable personnel able to introduce and operate the equipment.
- As far as the fuel prices and its availability, the PDD states that electricity and natural gas are widely used in Ukrainian industry. Prices for gas that is mostly imported from the Russian Federation are regulated by National Electricity Regulatory Commission and are established based on the level of demand and categories of consumers. Electric energy in Ukraine is produced at the thermal and nuclear power stations mainly by use of fossil fuel. Wholesale Electricity Market of Ukraine is managed by the state enterprise "Energorynok"; the level of prices for electric energy ranges greatly for different types of consumers.

(c) In such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure. According to the proposed approach emission reductions will be earned only when project activity will generate refined oil products, so no emission reductions can be earned due to any changes outside the project activity.

(d) Taking into account uncertainties and using conservative assumptions such as the following:

- Lower range of parameters is used for calculation of baseline emissions and higher range of parameters is used for calculation of project activity emissions;

- Default values were used to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations.

- The emissions of methane and nitrous oxide have not taken into consideration. This is conservative.

For more details, please, refer to Section B.1. of the PDD.

The identified areas of concern as to the baseline setting, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CL 05, CL 06, CAR 09, CL 07, CAR 02, CL 09, CL 10).

4.4 Additionality (27-31)

The most recent version 06.0.0 of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used. All explanations, descriptions and analyses are made in accordance with the selected tool.
Comprehensive explanations, descriptions and analyses are made in accordance with the selected tool and provided in the PDD Section B.2.

Additionality proofs are provided by conducting:

- identification of alternatives to the project activity consistent with mandatory law and regulations for both sub-projects;
- investment analysis that applies a benchmark analysis based on the NPV calculation made for both sub-projects for the period 20 years of the proposed project activity;
- common practice analysis proving that no activities similar to the proposed project activity are observed in Ukraine

Additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

The identified areas of concern as to the additionality, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 11, CAR 05).

4.5 Project boundary (32-33)

The project boundary defined in the PDD, which is physically limited to the plant site that is legally operated by the PRJSC LINIK, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as

- carbon dioxide emissions from use of natural gas as a fuel and feedstock in SMR Plant;
- carbon dioxide emissions of electricity consumption in Nitrogen-Oxygen Plant;

(ii) Reasonably attributable to the project (indirect GHG emissions due to the consumption of power from the Ukrainian electricity grid), such as

- carbon dioxide emissions from electricity consumption in SMR Plant including PSA Unit

- carbon dioxide emissions of electricity consumption in Nitrogen-Oxygen Plant

The CH4 and N2O emission reductions are not claimed. This is conservative.

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

Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

The identified areas of concern as to the project boundary, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CL 02).

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 11/12/2006, which is the date of positive expert's conclusion on design paperwork for Sub-project 2 (Listed in Section 7 References Category 2 Documents under No 106) and it is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 20 years and 2 months (or 242 months).

The PDD states the length of the crediting period in years and months, which is 20 years and 2 months (or 242 months), including the part of crediting period within the first commitment period of the Kyoto Protocol that equals 4 years and 2 months (or 50 months) and the part of crediting period after the first commitment period of the Kyoto Protocol that is 16 years (or 192 months) and its starting date as 01/11/2008 and the date of its end as 31/12/2028.

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

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

The identified areas of concern as to the crediting period, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR10).

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that the monitoring plan is established in accordance with appendix B of the JI guidelines and paragraph 9, option (a) (JI specific approach) "Guidance on criteria for baseline setting and monitoring" version 03 developed by the JISC.

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as

- Hydrogen produced at the relevant period as a result of the implementation of the project activity
- Electricity consumption for hydrogen production at the relevant period as a result of the implementation of the project activity
- Natural gas consumption (as fuel) for hydrogen production at the relevant period as a result of the implementation of the project activity
- Natural gas consumption (as material) for hydrogen production at the relevant period as a result of the implementation of the project activity
- Electricity consumption for nitrogen production at the relevant period as a result of the implementation of the project activity

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. are clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions to be monitored, such as

- Specific electricity consumption per tonne of hydrogen in baseline scenario
- Specific natural gas consumption (as fuel) per tonne of hydrogen in baseline scenario
- Specific natural gas consumption (as raw material) per tonne of hydrogen in baseline scenario
- Electricity consumption for nitrogen production in baseline scenario

- Net calorific value of natural gas
- Carbon content of natural gas
- Oxidation factor for natural gas combustion
- Specific carbon emission factor for the Ukrainian electricity grid

The monitoring plan draws on the list of standard variables indicated in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC, as appropriate.
The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as those ones provided in PDD Section D.1. Table 15, as well as in Annex 2 Table A2-1 and Table A2-2

(ii) There are no 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.

(iii) Data and parameters that are monitored throughout the crediting period are presented in Sections D.1.1.1. and D.1.1.3. of the PDD

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as use of company records; readings of the electricity, natural gas and hydrogen meters being monitored continuously with monthly totals, as well as Orders of the DFP of Ukraine being monitored on annual basis.

The monitoring plan elaborates all algorithms and formulae used for the calculation of baseline emissions and project emissions from the project, leakage, as appropriate.

Baseline GHG emissions are calculated as follows:

$$BE_y = BE_{SP1,y} + BE_{SP2,y}$$

where:

BE_y Baseline GHG emissions in period y, tCO_2e;

$BE_{SP1,y}$ Baseline GHG emissions of Sub-project 1 in period *y*, tCO_2e;

$BE_{SP2,y}$ Baseline GHG emissions of Sub-project 2 in period *y*, tCO_2e;

Baseline GHG emissions of Sub-project 1 in period:

$$BE_{SP1,y} = BE_{SP1,EL,y} + BE_{SP1,NG,y}$$

where:

$BE_{SP1,EL,y}$ Baseline GHG emissions in period *y* from electricity consumption for hydrogen production, tCO_2e;

$BE_{SP1,NG,y}$ Baseline GHG emissions in period *y* from natural gas consumption (as fuel and material) for hydrogen production, tCO_2e;

Baseline GHG emissions of Sub-project 2 in period:

$$BE_{SP2,y} = EC_{SP2,BL} \times EF_{CO2,EL,y}$$

where:

$EC_{SP2,BL}$ Electricity consumption for nitrogen production in baseline scenario, MWh;

$EF_{CO2,EL,y}$ CO_2 emission factor for electricity consumption in period *y*, tCO_2/MWh;

Project GHG emissions are calculated as follows:

$$PE_y = PE_{SP1,y} + PE_{SP2,y}$$

where:

PE_y Project GHG emissions in period *y*, tCO_2e;

$PE_{SP1,y}$ Project GHG emissions of Sub-project 1 in period *y*, tCO_2e;

$PE_{SP2,y}$ Project GHG emissions of Sub-project 2 in period *y*, tCO_2e;

Project GHG emissions of Sub-project 1:

$$PE_{SP1,y} = PE_{SP1,EL,y} + PE_{SP1,NG,y}$$

where:

$PE_{SP1,EL,y}$ Project GHG emissions in period *y* from electricity consumption for hydrogen production, tCO_2e;

$PE_{SP1,NG,y}$ Project GHG emissions in period *y* from natural gas consumption (as fuel and material) for hydrogen production, tCO_2e;

Project GHG emissions of Sub-project 2 in period:

$$PE_{SP2,y} = EC_{SP2,PJ,y} \times EF_{CO2,EL,y}$$

where:

$EC_{SP2,PJ,y}$ Electricity consumption for nitrogen production due to project activity in period *y*, MWh;

$EF_{CO2,EL,y}$ CO_2 emission factor for electricity consumption in period *y*, tCO_2/MWh;

No leakage emissions are considered.

The GHG emission reductions in period are calculated as follows:

$ER_y = BE_y - PE_y$

where:

ER_y GHG emissions reductions of the JI project in period *y*, tCO_2e;

BE_y Baseline GHG emissions in period *y*, tCO_2e;

PE_y Project GHG emissions in period *y*, tCO_2e.

The monitoring plan presents the quality assurance and control procedures for the monitoring process including:

- conducting regular calibrations of applied measurement equipment according to relevant industry standards;
- performing regular cross-checks for rated characteristics of the equipment and installations involved in the project;
- archiving, data storage and record handling procedure;
- training of monitoring personnel;
- observing procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting;
- emergency preparedness for cases where emergencies can cause unintended emissions;
- collection and archiving of the information on the environmental impacts of the project.

The QC/QA procedures are considered fully and thoroughly in the monitoring plan established and presented in Sections D.1. and D.2.of the PDD.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. A comprehensive description of the operational and management structure that the project participants will apply in implementing the monitoring plan is provided in Section D.3. of the PDD. The management team headed by the Director of the company is responsible for monitoring, collection, registration, visualization, archiving, reporting of the monitored data and periodical checking of the measurement devices. The responsibilities of the personnel involved in the monitoring procedure are clearly structured
(the overall structure that the project operator will apply in implementing the monitoring plan is presented in Figure 7 of the PDD).

Collecting and transferring the data for monitoring purposes will be conducted by the personnel of the following departments:

- Optimization department
- Energy department

- Environmental department
- Instrumental department
- Labour protection department, as well as

other departments in charge of submitting relevant data for the monitoring purposes.

On the whole, the monitoring plan reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in Table 15, Sections D.1.1.1. and D.1.1.3., a complete compilation of the data that need to be collected for its application, including data that are measured and data that are collected from other sources, such as official statistics, technical reports and statistics of the project owner, studies and reports of the State Environmental Investments Agency of Ukraine, National Electricity Regulatory Commission of Ukraine, other national laws and regulations.
The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.
The identified areas of concern as to the monitoring plan, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CL 08).

4.8 Leakage (40-41)

No leakages take place during the project activities. The only source of greenhouse gas emissions outside the project boundaries and attributable to the project are emissions from electric energy generation at power plants operating on combustive fuel. This source is considered in the monitoring of greenhouse gas emissions by use of applying indirect specific carbon dioxide emissions from electricity consumption calculated for each year by the Ukrainian DFP.

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

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

The PDD provides the ex-ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are 3 349 131 tonnes of CO_2 equivalent for the whole crediting period, including 809 739 tonnes of CO_2 equivalent for the part of crediting period within the first commitment period of the Kyoto Protocol

and 2 539 392 CO_2 equivalent for the part of the crediting period after the end of 2012;

(b) No leakage emissions are considered
(c) Emissions for the baseline scenario (within the project boundary), which are 4 774 068 tonnes of CO_2 equivalent for the whole crediting period, including 1 100 356 tonnes of CO_2 equivalent for the part of crediting period within the first commitment period of the Kyoto Protocol and 3 673 712 CO2 equivalent for the part of the crediting period after the end of 2012;

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 1 424 937 tonnes of CO_2 equivalent the whole crediting period**,** including 290 617 tonnes of CO_2 equivalent for the part of crediting period within the first commitment period of the Kyoto Protocol and 1 134 320 tonnes of CO_2 equivalent for the part of the crediting period after the end of 2012.

The formula used for calculating the estimates referred above, which are mentioned in Section 4.7 above, are consistent throughout the PDD.

For calculating the estimates referred to above, key factors mentioned in Section 4.3. of the present Determination Report influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as official statistics, technical reports and statistics of the project owner, studies and reports of the State Environmental Investments Agency of Ukraine, National Electricity Regulatory Commission of Ukraine, other national laws and regulations are clearly identified, reliable and transparent.

CO_2 emission factor for electricity consumption that is used for emission reduction calculation and is equal to the indirect specific carbon dioxide emissions from electricity consumption by the 1st class electricity consumers according to the Procedure for determining the class of consumers, approved by the National Electricity Regulatory Commission of Ukraine from August 13, 1998 # 1052 was selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

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

The estimates referred to above are consistent throughout the PDD.

The identified areas of concern as to the estimation emission reductions or enhancement of net removals, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 12).

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party, such as:

- Environmental Impact Assessment (EIA) that is the part of the Ukrainian project planning and permitting procedures. Implementation regulations for EIA are included in the Ukrainian State Construction Standard DBN A.2.2.-1-2003 (Title: "Structure and Contents of the Environmental Impact Assessment Report for Designing and Construction of Production Facilities, Buildings and Structures")
- Project of the building of Pressure Swing Adsorption Unit. Explanatory Note. Environmental Impact Assessment. 1819.008-RP-OVOS, "Ukrinterenergoinzhiniring", Severodonetsk, 2007.
- Reconstruction of AK-1.5 units at Nitrogen-Oxygen Plant. Volume 4. Book 1. Section 6/ Environmental Impact Assessment. 846KB7.06.57-1.00-OVOS JSC "Severodonetskiy ORGHIM", Severodonetsk, 2006.

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.

The full scope EIA in accordance with the Ukrainian legislation has been conducted for the Sub-project 1 in 2007 by the local developer Ltd. "Ukrinterenergoinzhiniring" and for the Sub-project 2 in 2006 by the local developer JSC "Severodonetskiy ORGHIM". The findings of the reports are summarized in Section F.1. of the PDD. The report has been reviewed by the competent authorities of Ukraine that concluded was not considered significant or prohibitive. Completion of Environmental Impact Assessment reports and positive findings of the competent state authority approved the compliance of the conducted EIA complies with the Ukrainian laws and regulations.

Transboundary impacts are not observed. There are no impacts that manifest within the area of any other country and that are caused by a proposed project activity which wholly physically originates within the area of Ukraine.

It is also stated by the project participants that collection and archiving of the information on the environmental impacts of the project will be done

based on the approved EIA in accordance with the Host Party legislation - State Construction Standard DBN A.2.2.-1-2003 :"Structure and Contents of the Environmental Impact Assessment Report for Designing and Construction of Production Facilities, Buildings and Structures" State Committee Of Ukraine On Construction And Architecture, 2004.

4.11 Stakeholder consultation (49)

Stakeholder consultation was not undertaken as it is not required by the host party.

4.12 DETERMINATION REGARDING SMALL SCALE PROJECTS (50-57)

Not applicable

4.13 DETERMINATION REGARDING LAND USE, LAND-USE CHANGE AND FORESTRY (LULUCF) PROJECTS (58-64)

Not applicable

4.14 DETERMINATION REGARDING PROGRAMMES OF ACTIVITIES (65-73)

Not applicable

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

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

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the “Implementation of energy saving measures at PRJSC LINIK, Ukraine” Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

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

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 2.2 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation 2.2 and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

7 REFERENCES

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

/1/ Project Design Document “Implementation of energy saving measures at PRJSC LINIK, Ukraine”, version 1.0 dated 06/04/2012
/2/ Project Design Document “Implementation of energy saving measures at PRJSC LINIK, Ukraine”, version 2.0 dated 13/06/2012
/3/ Project Design Document “Implementation of energy saving measures at PRJSC LINIK, Ukraine”, version 2.1 dated 04/07/2012
/4/ Project Design Document “Implementation of energy saving measures at PRJSC LINIK, Ukraine”, version 2.2 dated 15/10/2012
/5/ Emission reduction calculation spreadsheet file, version 1.0 dated 06/04/2012
/6/ Emission reduction calculation spreadsheet file, version 2.0 dated

13/06/2012

/7/ Emission reduction calculation spreadsheet file, version 2.2 dated 15/10/2012

/8/ Investment analysis spreadsheet file, version 1.0 dated 06/04/2012

/9/ Investment analysis spreadsheet file, version 2.0 dated 13/06/2012

/10/ Letter of Endorsement #2585/23/7 dated 14/09/2012 issued by the State Environmental Investment Agency of Ukraine

/11/ Letter of Approval Ref 2012JI31 dated 02/07/2012 issued by the Ministry of Economic Affairs, Agriculture and Innovation of the State of the Netherlands

Category 2 Documents:

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

/1/ Photo–Hydrogen Unit

/2/ Certificate # 225-11-06-09 on periodical testing of knowledge on health and safety (Stanislav Petrukhov)

/3/ Photo–control panel

/4/ Report on daily balance of HU (Hydrogen Unit)

/5/ Unit balance sheet

/6/ Private Joint Stock Company "LISICHANSK OIL INVESTMENTS COMPANY" (PRJSC "LINIK") production records

/7/ Description of hydrogen unit technological process by the means of hydrocarbon gases conversion (Volume 1, 2). Regulation index TP 32292929.006:2009. Approved 20/10/2009. Valid till 23/03/2015

/8/ Photo–Pressure difference transmitter type EJX110A, fabrication # 91JC29700

/9/ Photo– Pressure difference transmitter type EJX110A, fabrication # 91JC29699

/10/ Photo– Pressure difference transmitter type EJX110A, fabrication # 91JC29697

/11/ Health and safety data

/12/ Passport on power meter type САЗУ-И670Д, fabrication # 538986 (last calibration date – 27/05/2009), shop # 20

/13/ Passport on power meter type A1R-3-AL-C8-T, fabrication # 01002519 (last calibration date – 11/09/2009), shop # 20

/14/ Passport on power meter type СР4У-И673М, fabrication # 490667 (last calibration date – 28/05/2009), shop # 20

/15/ Passport on pressure difference transmitter type EJX110A, fabrication # 91JC29697 (last calibration date – 23/06/2011), shop # 2 HU

/16/ Passport on pressure difference transmitter type EJX110A, fabrication # 91JC29700 (last calibration date – 21/07/2011), shop # 2 HU

/17/ Passport on pressure difference transmitter type Сапфир-22-В4-ДД, fabrication # 114111 (last calibration date – 23/10/2006),

shop # 2 HU

/18/ Passport on pressure difference transmitter type STD 120, fabrication # C3194074003001 (last calibration date – 30/08/2011), shop # 2 HU

/19/ Passport on pressure difference transmitter type EJX110A, fabrication # 91JC29699 (last calibration date – 26/07/2011), shop # 2 HU

/20/ Passport on power meter type СР4У-И673М, fabrication # 520866 (last calibration date – 31/05/2010), shop # 20

/21/ Passport on power meter type САЗУ-И670Д, fabrication # 451178 (last calibration date – 29/05/2009), shop # 20

/22/ Passport on power meter type СР4У-И673М, fabrication # 970024 (last calibration date – 26/02/2009), shop # 20

/23/ Passport on power meter type САЗУ-И670Д, fabrication # 134091 (last calibration date – 31/05/2010), shop # 20

/24/ Agreement # 4286 dated 31/01/2012 on providing metrological services

/25/ List of measuring equipment in operation to be calibrated in 2012

/26/ Attestation certificate # РЬ-КЛ-06/2009, valid from 26/11/2009 to 25/11/2012, issued by Luhansk Regional Scientific and Production Centre for Standardization, Metrology and Certification

/27/ Photo–Nitrogen-Oxygen Plant, inventory # 9689

/28/ Description of Nitrogen-Oxygen Plant technological process (АК-1.5 unit). Regulation index ТР 32292929.001:2009. Approved 04/08/2008. Valid till 26/06/2012

/29/ Certificate # 2-10-12-07 on periodical testing of knowledge on fire safety (Viktor Rubashkin)

/30/ Protocol # 1 dated 24/01/2012 on qualification commission session on health and safety knowledge testing

/31/ Protocol # 2 dated 26/01/2012 on qualification commission session on health and safety knowledge testing

/32/ Protocol # 3 dated 26/01/2012 on qualification commission session on health and safety knowledge testing

/33/ Project design on Construction of Pressure Swing Adsorption Unit for hydrogen production

/34/ Project design on Construction of Pressure Swing Adsorption Unit for hydrogen production. Environmental Impact Assessment

/35/ Photo–Pressure sensor type 354Ex, fabrication # 33-E3082/74

/36/ Passport on power meter type A1140RAL-BW-4T, fabrication # 05010344 (last calibration date – 18/03/2010)

/37/ Passport on power meter type A1140RAL-BW-4T, fabrication # 05010325 (last calibration date – 18/03/2010)

/38/ Photo–Power meter type Альфа Метроника, fabrication # 01002519

/39/ Photo–Power meter type A1140RAL-BW-4T, fabrication # 05010344

/40/ Photo–Power meter type СР4У-И673М, fabrication # 490667

/41/ Photo–Power meter type САЗУ-И670Д, fabrication # 538986
/42/ Photo–Power meter type A1140RAL-BW-4T, fabrication # 05010325
/43/ Actual fuel consumption for 2006
/44/ Actual electricity consumption for 2006
/45/ Documents on energy resources consumption for 2007
/46/ Documents on energy resources consumption for 2008
/47/ Documents on energy resources consumption for 2009
/48/ Documents on energy resources consumption for 2010
/49/ Documents on energy resources consumption for 2011
/50/ Letter on automated electricity metering system and PIsistem database
/51/ Worksheet containing meters recording for 2012
/52/ Worksheet containing data on electricity consumption by units
/53/ Photo–Homepage of Operational control and materials balance calculation automated system of Private Joint Stock Company "LISICHANSK OIL INVESTMENTS COMPANY" (PRJSC "LINIK")
/54/ Policy of Private Joint Stock Company "LISICHANSK OIL INVESTMENTS COMPANY" (PRJSC "LINIK") on health, safety, environmental protection and quality management
/55/ Aims and targets of Private Joint Stock Company "LISICHANSK OIL INVESTMENTS COMPANY" (PRJSC "LINIK") on health and safety for 2011 (Integrated management system)
/56/ Aims and targets of Private Joint Stock Company "LISICHANSK OIL INVESTMENTS COMPANY" (PRJSC "LINIK") on quality management for 2011 (Integrated management system)
/57/ Aims and targets of Private Joint Stock Company "LISICHANSK OIL INVESTMENTS COMPANY" (PRJSC "LINIK") on environmental protection for 2011 (Integrated management system)
/58/ Oil and oil products losses at PRJSC "LINIK" for 2006
/59/ Oil and oil products losses at PRJSC "LINIK" for 2007 (# 73-03 dated 08/01/2008)
/60/ Oil and oil products losses at PRJSC "LINIK" for 2008 (# 73-04 dated 08/01/2009)
/61/ Oil and oil products losses at PRJSC "LINIK" for 2009 (# 73-01 dated 11/01/2010)
/62/ Certificate # 223 on periodical knowledge testing (Oleksandr Ivashyn)
/63/ Oil and oil products losses at PRJSC "LINIK" for 2011 (Form # 32-НП)
/64/ Oil and oil products losses at PRJSC "LINIK" for December 2010
/65/ Oil and oil products losses at PRJSC "LINIK" for November 2010
/66/ Oil and oil products losses at PRJSC "LINIK" for October 2010
/67/ Oil and oil products losses at PRJSC "LINIK" for September 2010
/68/ Oil and oil products losses at PRJSC "LINIK" for August 2010
/69/ Oil and oil products losses at PRJSC "LINIK" for July 2010

/70/ Oil and oil products losses at PRJSC "LINIK" for 6 months 2010
/71/ Oil and oil products losses at PRJSC "LINIK" for June 2010
/72/ Oil and oil products losses at PRJSC "LINIK" for May 2010
/73/ Oil and oil products losses at PRJSC "LINIK" for April 2010
/74/ Oil and oil products losses at PRJSC "LINIK" for March 2010
/75/ Oil and oil products losses at PRJSC "LINIK" for February 2010
/76/ Oil and oil products losses at PRJSC "LINIK" for January 2010
/77/ License Series AB # 585932 on providing educational services, issued by the Ministry of Education, Science, Youth and Sports of Ukraine
/78/ Personnel training and educational programme, PRJSC "LINIK", 2012, version 3.0 dated 01/02/2012
/79/ Letter # 080300/0017/2012/C3 dated 14/02/2012 containing information on PRJSC "LINIK" personnel training for 2011
/80/ Order # 198 dated 17/12/2008 (Nitrogen-Oxygen Plant, shop # 23)
/81/ Order # 158a dated 14/11/2008 (HU, shop # 2)
/82/ Information note dated 09/04/2012 on Construction of Pressure Swing Adsorption Unit and Reconstruction of AK-1.5 units
/83/ Statement of state inspection board on finished by construction object acceptance into operation, approved by the Order # 421 dated 13/06/2007 (Reconstruction of AK-1.5 unit)
/84/ Statement of state inspection board on finished by construction object acceptance into operation, approved by the Order # 845 dated 25/12/2008 (Construction of Pressure Swing Adsorption Unit)
/85/ Statement dated 15/08/2005 on visual-optical examination of 2AK-1.5 unit
/86/ Internal memo # 050102_0067_2012_C3 dated 01/03/2012 on new density parameters
/87/ Agreement # 0115-09/У dated 08/10/2009 on electricity supply
/88/ Agreement # 100 dated 01/12/2006 on electricity supply
/89/ Complex state expert opinion # 136 dated 11/04/2008 on Construction of Pressure Swing Adsorption Unit
/90/ State environmental expert opinion # 08-01-12-1555-64 dated 21/02/2008, issued by the State Environmental Protection Administration in Luhansk Region
/91/ State environmental expert opinion # 04-12-4679-155 dated 08/11/2006, issued by the State Environmental Protection Administration in Luhansk Region
/92/ Project design on Reconstruction of 2AK-1.5 unit for nitrogen production, approved 26/06/2006
/93/ Certificate # 01213115813 on conformity to BS OHSAS 18001:2007, issued by TÜV Rheinland Cert GmbH
/94/ Certificate # 01100115813 on conformity to ISO 9001:2008, issued by TÜV Rheinland Cert GmbH
/95/ Certificate on Quality Management System # UA2.043.05227-10 dated 13/10/2010, valid till 22/03/2015 issued by the National

Certification Authority of Ukraine
/96/ Certificate # 01100115813 on conformity to ISO 14001:2004, issued by TÜV Rheinland Cert GmbH
/97/ Protocol # 29 dated 31/07/2009 oa qualification commission session on health and safety knowledge testing
/98/ Protocol # 10 dated 14/04/2011 oa qualification commission session on health and safety knowledge testing
/99/ Decision # 5/6 dated 13/04/2006 on providing permit on PRJSC "LINIK" objects design and construction, issued by the Maloriazantsevo Village Council
/100/ Newspaper article There is no Air Pollution (PRJSC "LINIK")
/101/ Decision # 26/3 dated 21/11/2005 on providing permit on PRJSC "LINIK" objects design and construction, issued by the Maloriazantsevo Village Council
/102/ Newspaper article Notice on Environmental Impact (PRJSC "LINIK")
/103/ Agreement # 14/1839/11 dated 28/09/2011 on natural gas purchase
/104/ Logbook on fuel daily consumption by units, started 01/01/2011
/105/ Statement issued by PRJSC ”LINIK” on taking decision construction of Pressure Swing Adsorption Unit for hydrogen production and reconstruction of AK-1.5 units at Nitrogen-Oxygen Plant
/106/ Conclusion of the Complex State Expertise for the Project “Reconstruction of of AK-1.5 units at Nitrogen-Oxygen Plant” # 440 dated 11/12/2006 issued by Ukrainian State Investment Expertise in Luhansk Region

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/ Aleksandr Ivashin - Chief Specialist of the Chief Metrology Group, PRJSC LINIK

/2/ Maksim Grekov – Head of Equipment Technical Service and Maintenance Departmennt, PRJSC LINIK

/3/ Andrey Polozhentsev – Chief Power Engineer, PRJSC LINIK

/4/ Aleksei Kondrashov – Deputy Head of Labour Safety Department, PRJSC LINIK

/5/ Sergei Subbotin – Head of the Environment Protection Department, PRJSC LINIK

/6/ Nataliya Brovko – Head of Management Systems Department, PRJSC LINIK

/7/ Tamara Sryzhak – Deputy Director of HR Department, PRJSC LINIK

/8/ Tatiyana Zastava – Engineer on PDD documentation, PRJSC LINIK

/9/ Iliya Divenko – Chief Specialist, Economy Department, PRJSC LINIK

/10/ Gennadii Alekseenko – Energy Specialist, Projects and Strategy Initiatives Department, TNK-BP Commerce LLC

/11/ Oleg Shmonko – Head of Projects and Strategy Initiatives Department, TNK-BP Commerce LLC

/12/ Aleksei Karabon – Energy Engineer, Chief Power Engineer Department, PRJSC LINIK

/13/ Diana Krasyuk - Energy Engineer, Chief Power Engineer Department, PRJSC LINIK

/14/ Stanislav Petukhov – Operator, Hydrogen Production, PRJSC LINIK

/15/ Svetlana Smolij – Monitoring Equipment Specialist, Hydrogen Production, PRJSC LINIK

/16/ Viktor Ivanov – Head of Hydrogen Production Unit, Hydrogen Production, PRJSC LINIK

/17/ Viktor Rubashkin – Head of Nitrogen Supply Unit, PRJSC LINIK

/18/ Irina Srugaleva – Metrologist, PRJSC LINIK

/19/ Natallia Belskaya – JI Consultant, LLC “Global Carbon Ukraine”

/20/ Svitlana Ivanchuk – Commercial Director, LLC “Global Carbon Ukraine”

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APPENDIX A: DETERMINATION PROTOCOL
BUREAU VERITAS CERTIFICATION HOLDING SAS

DETERMINATION PROTOCOL

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The title of the project is: Implementation of energy saving measures at PRJSC LINIK, Ukraine	OK	OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scope is 5. Chemical industry	OK	OK
-	Is the current version number of the document presented?	PDD Version 2.2.	OK	OK
-	Is the date when the document was completed presented?	PDD dated 15 October 2012	OK	OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project;	The project is aimed at achieving GHG emission reductions by decreasing energy resources consumption and includes implementation of the following sub-projects	CL04	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	1. Construction Pressure Swing Adsorption Unit for hydrogen production 2. Reconstruction of AK-1.5 units at Nitrogen-Oxygen Plant a) Situation existing prior to the starting date of the project is briefly described. b) Baseline scenarios for both sub- projects consists in continuation of the current situation. c) Project scenario consists in implementation of the sub-projects mentioned above (For the more detailed description of the project, please, refer to Section 3 of the present DR) **CL 04.** Section A.2. of the PDD reads: "The JI was one of the drivers for the project from the start and financial benefits provided by the JI mechanism were considered as one of the reasons to start the project and are crucial in the decision to start the operations". How could this statement be proved?		
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of the project (incl. its JI component) is briefly summarized. The JI was one of the drivers for the project from the start and financial benefits provided	CAR06 CL03	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		by the JI mechanism were considered as one of the reasons to start the project and are crucial in the decision to start the operations. **CAR 06.** In accordance with the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04, please, describe in Section A.2. the situation existing within PRJSC "LINIK" prior to the project implementation. **CL 03.** Please note that incorrect translation leads to misunderstanding and at times makes no sense, thus, for instance, the following statement from Section A.2. :" In the baseline scenario it is assumed that nitrogen continue produced by A-8-1 Unit with emitting GHG into the atmosphere due to electricity consumption. Whereas modernization and use two AK 1.5 Units, proposed in this project".		
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Party(ies) and project participants involved in the project are listed as follows: - Party A: Ukraine and its legal entity Private Joint Stock Company "Lisichansk Oil Investments Company" (PRJSC "LINIK"); - Party B: The Netherlands and its legal entity Global Carbon B.V.. **CAR 07.** Please, provide the full name of PRJSC "LINIK" in Section A.3. as it is nowhere mentioned in the PDD.	CAR07	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Is the data of the project participants presented in tabular format?	The data of the project participants are presented in due tabular format.	OK	OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD.	OK	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Ukraine is indicated as Host Party.	OK	OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Luhansk region	OK	OK
-	City/Town/Community etc.	The town of Lisichansk	OK	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	48°50'46.12"N 38°18'1.95"E	OK	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	PDD Section A.4.2 provides comprehensive technical data of main equipment installed and actions to be implemented by the two sub-projects. **CAR 03.** In Section A.4.2. a Figure that presents the steam methane reforming process for hydrogen production the reference is made for, is absent.	CAR03 CAR04 CAR08	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Please, correct this. **CAR 04.** The footnote number is not correct. Please, check it and make corrections appropriately. **CAR 08.** In accordance with the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04, the project implementation schedule shall be provided in Section A.4.2.		
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				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	The proposed JI project is aimed at reduction of greenhouse gas emissions by decreasing the consumption of energy resources through the implementation of energy efficiency measures. Within the project activity, the plant implemented measures aimed at reduction of greenhouse gas emissions: • Installation of Pressure Swing Adsorption Unit for hydrogen extraction from the refinery off-gases with decreasing natural gas and electricity consumption – the emission reductions are generated by reducing the specific	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		consumption of the natural gas required for the production of hydrogen; • Reconstruction of two AK-1.5 units for nitrogen production with decreasing electricity consumption – emission reductions are generated through the decrease in specific electricity consumption required for nitrogen production.		
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided.	OK	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	The estimated annual reduction for the chosen credit period is provided in tCO_2e.	OK	OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format. Refer to Tables 5 and 6 of the PDD Section A.4.3.1	OK	OK
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	The length of the crediting period is indicated as 4 years and 2 months (or 242 months)	OK	OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent are provided in accordance with the calculated values in the spreadsheet provided to the verifier and are presented separately for the Kyoto and post-Kyoto periods.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR 01.** The project has no written approvals by the Parties involved. The project approval by the Host Party will be provided after the determination statement is issued by the AIE. **CL 01.** Please, provide the letter of Endorsement issued by Ukrainian DPF.	CAR01 CL01	Pending Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved is Ukraine.		
19	Has the DFP of the host Party issued a written project approval?	Refer to CAR 01.		Pending
20	Are all the written project approvals by Parties involved unconditional?	Refer to CAR 01.		Pending
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	The project participants will likely be authorized with the issue of the relevant project approvals. Pending a response to CAR 01.		Pending
Baseline setting				
22	Does the PDD explicitly indicate	The PDD explicitly indicates that that a	CL05	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	baseline for the JI project is set in accordance with Appendix B to decision 9/CMP.1 (JI guidelines), and with further Guidance on Criteria for Baseline Setting and Monitoring (version 03) (hereinafter referred to as Guidance). **CL 05.** The description of the approach chosen for a baseline setting is overloaded with the theoretical provisions cited from the guidelines and thus is nontransparent. Please provide clearly and briefly the description of an approach chosen from the three possible options as provided in the GUIDANCE ON CRITERIA FOR BASELINE SETTING AND MONITORING Version 03 paragraph 9. **CL 06.** Section B.1. of the PDD reads the following: “A baseline for the JI project has to be set in accordance with Appendix B to decision 9/CMP.1 (JI guidelines)”. Please clarify whether it has to be set or rather is set. **CAR 09.** In accordance with the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04 Section B.1. the project participants must describe and justify the baseline chosen in accordance with appendix B of the JI guidelines and the “Guidance on criteria for	CL06 CAR09 CL07	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		baseline setting and monitoring", as well as explicitly indicate which of the approaches regarding baseline setting, defined in the JISC's "Guidance on criteria for baseline setting and monitoring", is chosen. Please make respective corrections in Section B.1. Step1. Indication and description of the approach chosen regarding baseline setting. **CL 07.** Please, clarify or make due corrections in the following statement: "Project participants use approaches suggested by the Guidance and methodological tools provided by the CDM Executive Board". (Sub step 2c. Baseline identification, item 3 of the PDD)		
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	A detailed theoretical description in a complete and transparent manner and justification of the baseline chosen is provided in accordance with Paragraphs 23 through 29 of the Guidance for Baseline Setting and Monitoring and further use of the step-wise approach prescribed by the "Guidelines for users of the Joint Implementation Project Design Document Form" (version 04), which includes: Identification of the baseline by listing and	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one. Identification the most plausible future scenario by performing a barrier analysis. Identification and listing key factors for baseline setting.		
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs	Baseline is established: By listing and describing likely future scenarios available for the project owner and selecting the most plausible one. Four alternatives for the sub-project 1 and and three alternatives for the sub-project 2 were listed, and assessed. Based on the alternatives analysis taking into account the results of the barrier analyses, a conclusion is made that continuation of existing situation is the most plausible future scenario and is the baseline scenario for both subprojects. (a) Taking into account relevant national policies and circumstance regarding industry development (refer to Section B.1, footnotes 17) as well as key appropriate factors that affect a baseline, such as availability of capital for the project implementation; fuel prices and its availability, high costs and local availability of project technologies and	CAR02 CL09 CL10	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	techniques, skills and know-how regarding the ability to introduce and operate the project equipment (refer to Section B.1.) (b) In a generally transparent manner with regard to the choice of the JI specific approach and related assumptions, parameters, data sources and key factors for baseline setting, which are listed in Section B.1. Taking into account of the uncertainty and using a conservative assumption such as the following: (c) Lower range of parameters is used for calculation of baseline emissions and higher range of parameters is used for calculation of project activity emissions; (d) Default values were used to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations. (e) The emissions of methane and nitrous oxide have not taken into consideration. This is conservative. (f) In such a way that ERUs cannot be		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		earned for decreases in activity levels outside the project or due to force majeure. (g) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring". **CAR 02.** It is evident that all variables, parameters and data sources used for establishing the baseline were taken as historic ones and thus, should have been set as ex-post data. Please, make respective corrections to the tables of parameters for baseline setting in Section B.1. of the PDD. **CL 09.** Please clarify what the standard QA/QC procedures referred to the project parameters that are to be used are? What standard is meant? (Section B.1., tables of parameters) **CL 10.** Please clarify what the following statement referring to the table of project parameters in Section B.1. means: "According to the project owner policy". What is this policy? It should be described.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used,	N/A		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?			
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	CO_2 emission factor for electricity consumption accepted by the Designated Focal Point (DFP) of Ukraine and based on the actual power plants data according to the Calculation methodology for specific carbon dioxide emissions from electric energy production at thermal power plants and its consumption, National Environmental Investment Agency of Ukraine (NEIA), 2011	OK	OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and	The analysis of alternatives, investment analysis and common practice analysis were undertaken to demonstrate additionality of the project applying the most recent version 06.0.0 of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used. **CAR11.** Please, refer to Section B.2. of the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04 and clearly state in Section B.2. an approach for demonstrating additionality as required by Section B.2. of	CAR11	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04, as well as the paragraph 44 of the GUIDANCE ON CRITERIA FOR BASELINE SETTING AND MONITORING Version 03		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Comprehensive justifications, explanations, descriptions and analyses are made in accordance with the selected tool and provided in the PDD Section B.2.	OK	OK
29 (b)	Are additionality proofs provided?	Additionality proofs are provided by conducting: • identification of alternatives to the project activity consistent with mandatory law and regulations for both sub-projects; • investment analysis that applies a benchmark analysis based on the NPV calculation made for both sub-projects for the period 20 years of the proposed project activity;	CAR05	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		• common practice analysis proving that no activities similar to the proposed project activity are observed in Ukraine The developer calculates the project NPV using the real discount rate derived from the sum of risk-free rate + sum of the risk premiums adjusted for inflation. While the approach is correct in general it is obvious that the developer employs the return on equity rate instead of WACC as developer states that the whole project has been financed through the equity. **CAR 05.** In order to justify the discount rate benchmark, please, provide the documentary evidence confirming that all stages of the project are financed solely from the equity investment without bank loans bonds and other forms of debt. Otherwise it would be beneficial to employ WACC as the benchmark following the Guidelines on the assessment of investment analysis by considering the capital structure as being 50/50 own/borrowed funds. To estimate the cost of the debt capital you may apply average loan interest rates in foreign currency prevailing in Ukraine for the moment of the project start.		
29 (c)	Is the additionality demonstrated appropriately as a result?	Approach selected for determination of appropriate analysis method is correct.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Benchmark analysis is the proper method of analysis for the present project.		
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	All explanations, descriptions and analyses are made in accordance with the selected tool.	OK	OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant. These are: - Baseline CO_2 emissions from use of natural gas as a fuel and feedstock in SMR Plant; - Baseline CO_2 emissions from electricity consumption in SMR Plant; - Baseline CO_2 emissions from electricity consumption in Nitrogen-Oxygen Plant (only A-8-1 unit); - Project CO_2 emissions from use of natural gas as a fuel and feedstock in SMR Plant; - Project CO_2 emissions from electricity consumption in SMR Plant including PSA Unit; - Project CO_2 emissions from electricity	CL02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		consumption in Nitrogen-Oxygen Plant (A-8-1 and AK-1.5 units) The CH_4 and N_2O emission reductions are not claimed. This is conservative. **CL 02.** Please, explain why the condensate stripping is excluded from the emission sources.		
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	Delineation of the project boundary and the gases and sources included are appropriately described and justified in Section B.3. of the PDD by using Figures 2 to 5.	OK	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated; refer to 32 (a) above. All exclusions made are appropriate as a conservative or logic assumption.	OK	OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	Starting date of the project is 11/12/2006 which is the date of positive expert's conclusion on design paperwork for Sub-project 2. (Listed in Section 7 References Category 2	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Documents under No 106)		
34 (a)	Is the starting date after the beginning of 2000?	Refer to 34 (a).	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The operational lifetime of the project will be 20 years and 2 months (which equals to 242 months). CAR 10. Please, state operational lifetime and crediting period in month as well as it is required by the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04	CAR10	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	Length of crediting period: 20 years and 2 months (which equals to 242 months).	OK	OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	The starting date of the crediting period is after the date of the first emission reductions generated by the project.	OK	OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	Start of the crediting period: 01/11/2008. End of the crediting period: 31/12/2028. The expected lifetime of the project is estimated to last until the end of December 2028	OK	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval?	The status of emission reductions or enhancements of net removals generated by JI projects after the end of the first commitment period of the Kyoto Protocol may	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	be determined by any relevant agreement under the UNFCCC. The estimates of emission reductions are presented separately for those until 2012 and those after 2012?		
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated that a JI specific approach is chosen.	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	The monitoring plan describes: - data to be monitored: • hydrogen produced; • electricity consumption for hydrogen production; • natural gas consumption (as fuel) for hydrogen production; • natural gas consumption (as material) for hydrogen production; • electricity consumption for nitrogen production; - the period in which they will be monitored: continuously with monthly totals or/annually;	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		- all decisive factors for the control and reporting of project performance: internal and external data sources; quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan.		
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specifies the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions to be monitored. For data to be monitored, please refer to 36(a) above. For constants please refer to the next paragraph.	OK	OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	Constants used are the default values of the parameters as follows: • Net calorific value of natural gas • Carbon content of natural gas • Oxidation factor for natural gas combustion • specific carbon emission factor for the Ukrainian electricity grid The default values originate from recognized sources and are presented in a transparent manner.	OK	OK
36 (b) (i)	For those values that are to be provided by the project participants,	There are no default values to be provided by the project participants.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	does the monitoring plan clearly indicate how the values are to be selected and justified?			
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	The monitoring plan provides clearly indicates the precise references from which these default values are taken (for CO_2 emission factor for electricity consumption - footnotes 24, 25; for other values - National Inventory Report of Ukraine 1990-2010). N/A for conservativeness of the values.	OK	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	The data sources used in the project are reliable and constantly available as they come from technical reports of the project owner, as well as national legislative regulations.	OK	OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.		
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	The monitoring plan notes parameters, coefficients, variables, etc. that are used to calculate baseline emissions based on monitored data (they are presented in table D.1.1.1. and D.1.1.3. of the PDD)	OK	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of	The monitoring plan draws on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	"Guidance on criteria for baseline setting and monitoring"?	monitoring".		
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes: (i) Refer to PDD Section D.1. Table 15, as well as Annex 2 Table A2-1 and Table A2-2 (ii) N/A. iii) Refer to Section D.1.1.1. of the PDD **CL 08.** In accordance with the requirements of Section D.1. of the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04 please explicitly and clearly distinguish: a) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; 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; and c) Data and parameters that are monitored throughout the crediting period.	CL08	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency)	Yes, the methods used (gas, electricity and hydrogen meters,) and data collection frequency (continuously or annually) and	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and recording?	recording (electronic/paper) are clearly defined in the monitoring plan		
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	These are Formulae: (D.1-6) –for project emissions, (D.7-11) –for baseline emissions, N/A–for leakage, (D.16) - for emission reduction.	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Yes.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	Yes.	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes.	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes.	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	It is regulated by the State Standard of Ukraine DSTU 2708:2006 “Metrology. Calibration of measuring instruments. The organization and procedure” according to which the calibration of equipment will be done as required by the Host Party legislation.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the	There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the monitoring plan and	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	procedure for calculating the emissions or net removals of the baseline ensured?	on spreadsheet.		
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	There are no any parts of the algorithms or formulae that are not self-evident.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Yes, the monitoring is in line with current operational routines.	OK	OK
36 (f) (vii)	Are references provided as necessary?	N/A		
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions are explained in a transparent manner if needed.	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A		
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	The meters are recording hydrogen production, electricity and natural gas consumption continuously. The issue of uncertainty range and confidence interval is irrelevant for such measurements.	OK	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be	State Standard of Ukraine DSTU 2708:2006 “Metrology. Calibration of measuring instruments. The organization and procedure”	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	is applied. According to this standard the calibration of equipment will be done as required by the Host Party legislation.		
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	QC/QA procedures are given a full consideration in PDD Sections D.1. and D.2.	OK	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure that the project participants will implement in order to monitor emission reduction generated by the project is described in sufficient detail in PDD Section D.3.	OK	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	On the whole, monitoring techniques are in line with current operation routines at the enterprise.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions.	OK	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	N/A		
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable				
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and	No leakages take place during the project activities. The only source of greenhouse gas	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	appropriately explain which sources of leakage are to be calculated and which can be neglected?	emissions outside the project boundaries and attributable to the project are emissions from electric energy generation at power plants operating on combustive fuel. This source is considered in the monitoring of greenhouse gas emissions by use of applying Indirect specific carbon dioxide emissions from electricity consumption calculated for each year by the Ukrainian DFP.		
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A		
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Option (a) is chosen	OK	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the	PDD provides ex ante estimates of: (a) Emissions for the project scenario (Section E.1); (b) N/A (c) Emissions for the baseline scenario (Section E.4); (d) Emission reductions adjusted by leakage (Section E.6).	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?			
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A	OK	OK
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the	(a) Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tonnes of CO_2 equivalent, on a source-by-source basis. (b) The formulae used in PDD are consistent. (c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate. (d) Data sources used for calculating the estimates are clearly identified, reliable and transparent. (e) Default values for CO_2 emission factor for electricity consumption, NCV of natural gas, carbon content of natural gas, oxidation factor for natural gas combustion are taken from	CAR12	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD?	identified and reliable sources. (f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner. (g)Estimates in 43 are consistent throughout the PDD. The annual average of estimated emission reductions calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve. **CAR 12.** Please present the totals of the baseline and project emissions as well as emission reductions for the two sub-projects in the ER calculation spreadsheet to make them comparable with the ones presented in the PDD Section A.4.3.1. and E.6.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Ex-post baseline emissions calculation is performed based on a 3year historic period before the project implementation. The data used in calculation are taken from the technical reports of the project owner.	OK	OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	PDD Section F.1. provides a list of EIAs performed for each subprojects. The findings of the reports are summarized in the section F.1. of the PDD. The environmental impact of the project has not been considered significant or prohibitive. The project has no transboundary impacts.	OK	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to	It is stated in the performed EIAs that the project activities comply with all requirements set to these kinds of facilities and do not have significant impact upon the environment.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?			
Stakeholder consultation				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	No stakeholder consultation process for the JI projects is required by the Host Party.	OK	OK
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable				
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable				
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable				

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
CAR 01. The project has no written approvals by the Parties involved.	19	The project obtained the Letter of Approval from the Netherlands Ref 2012JI31 dated 02/07/2012. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environmental Investment Agency of Ukraine, for receiving a Letter of Approval.	Pending The project approval by the Host Party will be provided after the determination statement is issued by the AIE.
CL 01. Please, provide the letter of Endorsement issued by Ukrainian DPF.	19	The project obtained the Letter of Endorsement #2585/23/7dated 14/09/2012 from the State Environmental Investment Agency of Ukraine. Due to the Netherlands legislation, no LoE from the Netherlands is needed. Please see attached file.	The issue is closed based on the LoE submitted from the PPS.

CAR 02. It is evident that all variables, parameters and data sources used for establishing the baseline were taken as historic ones and thus, should have been set as ex-post data. Please, make respective corrections to the tables of parameters for baseline setting in Section B.1. of the PDD.	23	As the values that are used for establishing the baseline are used at current point in time for determining future emissions and are based on historical data the baseline is based on ex-ante (Latin for "before the event") data. In other words we are using already known data to establish baseline emissions before they happen. Alternative to that would be to establish the baseline using monitored data that are acquired after the emissions have taken place – using the ex post (Latin for "after the event") data. For the period of this JI project implementation the baseline emissions are established as ex-ante data based on historical values with constant values during the whole period. Please find revised PDD, version 2.0.	CAR 02 is closed based on the explanation provided by the project participants.

CAR 03. In Section A.4.2. a Figure that presents the steam methane reforming process for hydrogen production the reference is made for, is absent. Please, correct this.	-	The steam methane reforming process for pure hydrogen production consists of several stages as shown in the Figure in the Annex 4. Relevant changes have been made in Section A.4.2 of PDD. Please find revised PDD, version 2.0.	CAR 03 is closed based on the required changes made to the PDD

CL 02. Please, explain why the condensate stripping is excluded from the emission sources.	32 (a)	According to 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. "The primary release of CO_2 at plants using the natural gas catalytic steam reforming process occurs during regeneration of the CO_2 scrubbing solution with lesser emissions resulting from condensate stripping." In the project all CO_2 emission sources from Steam Methane Reforming Plant are included. All carbon in natural gas which is used by SMR Plant is converted into the CO_2 which is vented into the atmosphere and is included in the project. Relevant changes have been made in Section A.4.2 of PDD. Please find revised PDD, version 2.0.	CL 02 is closed based on the explanation provided by the project participants.
CAR 04. The footnote number is not correct. Please, check it and make corrections appropriately.	-	The right footnote number is 9 in section A.4.3.1 of PDD. Relevant changes have been made. Please find revised PDD, version 2.0.	CAR 04 is closed based on the corrections made

* 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3: Industrial Processes and Product Use Chapter 3: Chemical Industry Emissions p. 3.11
URL: http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/3_Volume3/V3_3_Ch3_Chemical_Industry.pdf (last reference – 06/04/2012)

The developer calculates the project NPV using the real discount rate derived from the sum of risk-free rate + sum of the risk premiums adjusted for inflation. While the approach is correct in general it is obvious that the developer employs the return on equity rate instead of WACC as developer states that the whole project has been financed through the equity. **CAR 05.** In order to justify the discount rate benchmark, please, provide the documentary evidence confirming that all stages of the project are financed solely from the equity investment without bank loans bonds and other forms of debt. Otherwise it would be beneficial to employ WACC as the benchmark following the Guidelines on the assessment of investment analysis by considering the capital structure as being 50/50 own/borrowed funds. To estimate the cost of the debt capital you may apply average loan interest rates in foreign currency prevailing in Ukraine for the moment of the project start.	29 (b)	Investment analysis was changed by considering the capital structure as being 50/50 own/borrowed funds. Please find revised Investment analysis, version 2.0.	CAR 05 is closed based on the required changes made to the investment analysis
CAR 06. In accordance with the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04, please, describe in Section A.2. the situation existing within PRJSC "LINIK" prior to the project implementation.	-	Relevant changes have been made in Section A.2 of PDD. Please find revised PDD, version 2.0.	CAR 06 is closed based on the required amendments made to the PDD

CL 03. Please note that incorrect translation leads to misunderstanding and at times makes no sense, thus, for instance, the following statement from Section A.2. :" In the baseline scenario it is assumed that nitrogen continue produced by A-8-1 Unit with emitting GHG into the atmosphere due to electricity consumption. Whereas modernization and use two AK 1.5 Units, proposed in this project".	-	Relevant changes have been made in Section A.2 of PDD. Please find revised PDD, version 2.0.	CL 03 is closed
CAR 07. Please, provide the full name of PRJSC "LINIK" in Section A.3. as it is nowhere mentioned in the PDD.	-	Relevant changes have been made in Section A.3 of PDD. Please find revised PDD, version 2.0.	The full name of the project owner is added. CAR 07 is closed
CL 04. Section A.2. of the PDD reads: "The JI was one of the drivers for the project from the start and financial benefits provided by the JI mechanism were considered as one of the reasons to start the project and are crucial in the decision to start the operations". How could this statement be proved?	-	Relevant changes have been made in Section A.2 of PDD. Please find revised PDD, version 2.0.	CL 04 is closed based on the information provided
CAR 08. In accordance with the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04, the project implementation schedule shall be provided in Section A.4.2.	-	Relevant changes have been made in Section A.4.2 of PDD. Please find revised PDD, version 2.0.	The project implementation schedule is added as required. Issue is closed

CL 05. The description of the approach chosen for a baseline setting is overloaded with the theoretical provisions cited from the guidelines and thus is nontransparent. Please provide clearly and briefly the description of an approach chosen from the three possible options as provided in the GUIDANCE ON CRITERIA FOR BASELINE SETTING AND MONITORING Version 03 paragraph 9.	22	Project participants have chosen the following approach regarding baseline setting, defined in the Guidance (Paragraph 9): • An approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI specific approach). Relevant clarification has been made in Section B.1. (Step1) of PDD. Please find revised PDD, version 2.0.	CL 05 is closed based on the clarification made to the PDD
CL 06. Section B.1. of the PDD reads the following: "A baseline for the JI project has to be set in accordance with Appendix B to decision 9/CMP.1 (JI guidelines)". Please clarify whether it has to be set or rather is set.	22	A baseline for the JI project is set in accordance with Appendix B to decision 9/CMP.1 (JI guidelines)*, and with further guidance on baseline setting and monitoring developed by the Joint Implementation Supervisory Committee (JISC). Relevant clarification has been made in Section B.1 of PDD. Please find revised PDD, version 2.0.	The mistake has been corrected. Issue is closed

* URL: http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=2 (last reference – 06/04/2012)

CAR 09. In accordance with the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04 Section B.1. the project participants must describe and justify the baseline chosen in accordance with appendix B of the JI guidelines and the "Guidance on criteria for baseline setting and monitoring", as well as explicitly indicate which of the approaches regarding baseline setting, defined in the JISC's "Guidance on criteria for baseline setting and monitoring", is chosen. Please make respective corrections in Section B.1. Step1. Indication and description of the approach chosen regarding baseline setting.	22	Relevant clarification has been made in Section B.1. (Step1) of PDD. Please find revised PDD, version 2.0.	CAR 09 is closed based on the clarification made to the PDD
CL 07. Please, clarify or make due corrections in the following statement: "Project participants use approaches suggested by the Guidance and methodological tools provided by the CDM Executive Board". (Sub step 2c. Baseline identification, item 3 of the PDD)	22	Relevant corrections have been made in Section B.1. (Sub step 2c) of PDD. Please find revised PDD, version 2.0.	CL 07 is closed based on the corrections made to the PDD
CAR 10. Please, state operational lifetime and crediting period in month as well as it is required by the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04	34 (b)	Relevant clarification has been made in Section C. of PDD. Please find revised PDD, version 2.0.	Relevant amendment was made to the PDD. CAR 10 is closed.

CAR11. Please, refer to Section B.2. of the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04 and clearly state in Section B.2. an approach for demonstrating additionality as required by Section B.2. of the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04, as well as the paragraph 44 of the GUIDANCE ON CRITERIA FOR BASELINE SETTING AND MONITORING Version 03	28	As suggested by Paragraph 44 (c) of the Annex 1 of the Guidance additionality can be demonstrated, inter alia, by using the following approach: the most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board (allowing for a grace period of eight months when the PDD is submitted for publication on the UNFCCC JI website), or any other method for proving additionality approved by the CDM Executive Board. At the time of PDD document completion the most recent version of the "Tool for the demonstration and assessment of additionality" (version 06.0.0) (hereinafter referred to as Tool) approved by the CDM Executive Board is and it is used to demonstrate additionality of the project activity. Relevant clarification has been made in Section B.2. (Step1) of PDD. Please find revised PDD, version 2.0.	Relevant clarification has been made. CAR 11 is closed

CL 08. In accordance with the requirements of Section D.1. of the GUIDELINES FOR USERS OF THE JI PDD FORM Version 04 please explicitly and clearly distinguish: a) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; 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; and c) Data and parameters that are monitored throughout the crediting period.	36 (d)	Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD are provided in the Table 15 of PDD in section D.1. There is no 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. The tables in sections D.1.1.1. and D.1.1.3. include data and parameters that are monitored throughout the crediting period. Relevant clarification has been made in Section D.1. of PDD. Please find revised PDD, version 2.0.	Relevant clarification has been made in Section D.1. of PDD. CL 08 is closed

CL 09. Please clarify what the standard QA/QC procedures referred to the project parameters that are to be used are? What standard is meant? (Section B.1., tables of parameters)	23	For data from National Inventory Report of Ukraine standard QA/QC procedures are used which was described in Section 1.6 of National Inventory Report of Ukraine 1990-2010. Please see Section 1.6 of National Inventory Report of Ukraine 1990-2010.	Based on the explanation provided, CL 09 is closed
CL 10. Please clarify what the following statement referring to the table of project parameters in Section B.1. means: "According to the project owner policy". What is this policy? It should be described.	23	Regular cross-checks for rated characteristics of Nitrogen-Oxygen Plant and SMR Plant are performed. The monthly and annual reports are based on the monthly technical reports data and regular cross-checks between them and previous statistical data are performed. Relevant clarification has been made in Section B.1 of PDD. Please find revised PDD, version 2.0.	Relevant clarification has been made in the updated PDD version
CAR 12. Please present the totals of the baseline and project emissions as well as emission reductions for the two sub-projects in the ER calculation spreadsheet to make them comparable with the ones presented in the PDD Section A.4.3.1. and E.6.	45	Relevant clarification has been made in ER calculation spreadsheet. Please find revised ER calculation spreadsheet (version 2.0).	Relevant clarification has been made in the revised ER calculation spreadsheet CAR 12 is closed