DETERMINATION REPORT

”ECO-ELTA” LLC

DETERMINATION OF THE

THE RECONSTRUCTION OF THE ELECTRICITY GRID OF THE “LUGANSK ENERGY INTERCONNECTION” LLC. IN ORDER TO LOWER THE ELECTRICITY TRANSPORTATION LOSES

REPORT NO. UKRAINE-DET/0826/2012

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-det/0826/2012

DETERMINATION REPORT THE RECONSTRUCTION OF THE ELECTRICITY GRID OF THE "LUGANSK ENERGY INTERCONNECTION" LLC. IN ORDER TO LOWER THE ELECTRICITY TRANSPORTATION LOSES

Date of first issue: 01/12/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: "Eco-Elta" LLC	Client ref.: Maksym Rogovoi

Summary:
Bureau Veritas Certification has made the determination of the "The Reconstruction of the Electricity Grid of the "Lugansk Energy Interconnection" LLC. in order to lower the electricity transportation loses" project of "Eco-Elta" LLC located in cities and towns of 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/0826/2012	Subject Group: JI
Project title: The Reconstruction of the Electricity Grid of the "Lugansk Energy Interconnection" LLC. in order to lower the electricity transportation loses	
Work carried out by: Kateryna Zinevych – Team Leader, Lead verifier Vyacheslav Yeriomin – Team member, Verifier	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer Sergii Verteletskyi –Technical Specialist	
Work approved by: Ivan Sokolov - Operational Manager	
Date of this revision: 06/12/2012	Rev. No.: 01 / Number of pages: 59

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1 INTRODUCTION

"Eco-Elta" LLC has commissioned Bureau Veritas Certification to determine its JI project "The Reconstruction of the Electricity Grid of the "Lugansk Energy Interconnection" LLC. in order to lower the electricity transportation loses" (hereafter called "the project") at 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:

Kateryna Zinevych
Bureau Veritas Certification Team Leader, Climate Change Verifier

Vyacheslav Yeriomin
Bureau Veritas Certification Climate Change Verifier

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal reviewer

Sergii Verteletskyi
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) submitted by »Eco-Elta» LLC 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, Approved CDM methodology and/or 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, «Eco-Elta» LLC revised the PDD and resubmitted it on 25/10/2012.

The determination findings presented in this report relate to the project as described in the PDD version(s) 1.1.

2.2 Follow-up Interviews

On 28/11/2012 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 Luhansk Energy Interconnection" LLC and «Eco-Elta» LLC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
"Luhansk Energy Interconnection" LLC	➢ Project History ➢ Project Approach ➢ Project boundary ➢ Implementation Schedule ➢ Organization structure ➢ Authorities and responsibilities ➢ Training of personnel ➢ Quality management procedures and technologies ➢ Records on rehabilitation/implementation of equipment ➢ Metering equipment control ➢ Metering record keeping system, database ➢ Technical documentation ➢ Monitoring plan and procedures ➢ Permits and licenses
CONSULTANT «Eco-Elta» LLC	➢ Baseline methodology ➢ Monitoring plan ➢ Additionality proofs ➢ Calculation of emission reductions

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 "Luhansk Energy Interconnection" LLC is the enterprise for the electricity transportation and supply. The enterprise is the member of the Wholesale Electricity Market. The significant parts among of comsumers are the coalmines, metal works and machinery plants of Luhansk Region.

The Project foresees the implementation of the electricity loses reduction measures at the transmission lines of the "Luhansk Energy Interconnection" LLC as well as the electricity transportation and loses registration precision increase measures – the installation of the electricity meters with the higher level of accuracy.

Moreover, the Project foresees the implementation of the Automatic Electricity Registration System for the Company balance compilation, for the commercial accounting with the SE "Energorynok".

Thus due to the above-mentioned actions the specific electricity loses at the grid will be lowered. That will lead to the electricity production reduction at the Ukrainian TPPs by the value of the electricity losses reduction that, in its turn, will lead to the GHG emission reduction.

For these purpose the Project foresees such measures:
1. The replacement of the power transformers, circuit breakers, control panels and other equipment at the electricity substations that will lower loses significantly. For example, transformer TDTNG-31500/110 (loses coefficient – 5.05) was replaced by the TDTN-40000/110 (loses coefficient – 0.21) transformer.

The reconstruction of the substations leads to the electricity loses decrease, the equipment reliability increase.

2. The Project foresees the replacement of the wires and cables for those with the bigger section and the higher transmission capacity. New self-supporting cables with bigger section have lower specific weight for linear unit. Bigger section of installed wires will reduce thermal losses and let increase carrying capacity of transmitting lines. Replacement of wires will unload transmitting towers and increase reliability of power supply.

3. The other significant aspect of the Project is the installation of the glass and polymer insulators. That is the important part of the electricity transmission process and the reliability of the insulators makes an influence on the value of the electricity transmitted. Use of new flexible polymeric insulators with self-cleaning ability will reduce surface-leakage currents on transmitting lines towers and reduce losses for energy transmitting as result. New glass insulators have more void-free and dense surface so will be polluted less than older ones.

All proposed measures are forwarded on decreasing electric losses in power lines and reducing GHG emissions as a result.

CAR01-CAR03 and CL01-CL03 and their resolutions/conclusions applicable to Project description is listed in the Annex A (Table 2)

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 18 Corrective Action Requests and 6 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 already received Letter of Endorsement #3674/23/7 dated 29/11/2012 issued by State Environmental Investment Agency.
The project written approval has been obtained from the Host Party. Letter of Approval #№3899/23/7 dated 19/12/2012 has been issued by the State Environment Investment Agency of Ukraine.

Letter of approval #DOPpek-4430-33/11550/13/MK/EBS dated 22/03/2013 has been issued by Ministry of Environment protection of Poland, the Party-buyer of ERUs

The Bureau Veritas Certification obtained abovementioned Letters from "Eco-Elta" LLC and doesn't doubt in its authenticity.

CAR04, CAR05 and their resolutions/conclusions applicable to Project approvals is listed in the Annex A (see Table 2)

4.2 Authorization of project participants by Parties involved (21)

Next legal entities are listed in the PDD version 1.1 dated 25/10/2012 as project participants:

- "Luhansk Energy Interconnection" LLC from Ukraine, the Party Involved;
- Imex Energo sp. z.o.o, from the Poland the Party-buyer of ERU.

Contact information on project participants are listed in the Annex 1 of the PDD.

The official authorization of each legal entity listed as a project participant in the PDD by Parties involved will be provided in written project approvals (see section 4.1 of this Report).

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline.

On this basis the approach for baseline and monitoring was developed, which can be applied to JI projects in accordance with Annex B of JI Guidelines.

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

a) Identifying and listing alternatives to the project activity on the basis of conservative assumptions and taking into account uncertainties.

b) Identifying the most plausible alternatives considering relevant sectoral policies and circumstances, such as economic situation in the energetic sector in Ukraine and other key factors that may affect the baseline. The baseline is identified by screening of the alternatives based on the technological and economic considerations for the project developer, as

well as on the prevailing technologies and practices in Ukrainian energy industry at the time of the investment decision.

Alternative 1: Continuation of the existing situation.
There are no barriers for this Alternative

Alternative 2: Implementation of proposed project activity without JI registration.

Investment barriers: The project activity within the framework of the suggested project is a perpetual process which requires considerable annual investments and manpower attraction. This is connected with:
- Annual electrotechnical equipment renewal, which is represented in the Ukrainian market;
- Necessity of the perpetual stuff training to work with the new equipment.

Alternative 3: The implementation of the part of the Project measures.
This alternative meets the same barriers as the *Alternative 2* does, but the effectiveness of the partial implementation of the Project measures is significantly lower (the synergetic effect of the implemented measures is quite high). So, this alternative is technically possible, but not reasonable and feasible.

The alternatives has been identified based on national practice and reasonable assumptions with regard to sectoral legislation and reform, economic situation in the country, availability of materials as technologies and logistics

The project developer proposed three alternatives to the project activity's measures are:

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

- A comprehensive analysis and an in-depth description of the reform policies and legislation concerning the development and reforming of the Ukrainian energy industry. At this time effective united complex state program for lowering of energy losses in grids is absent
- Describing economic situation. Inner electricity market in Ukraine is significantly controlled by Ukrainian government. "Luhansk Energy Interconnection" LLC is a company which cannot influence on prices of transmitted electric energy.

- 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 Ukraine, and Russia are 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.

(d) 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 electric grids transport electric energy, so no emission reductions can be earned due to any changes outside the project activity.

(e) 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.

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

The estimation of baseline scenario emissions is calculated by next formulae:

Baseline emissions are calculated as follow:

$$BEy = Qy \times PPER \times EFy \quad (1)$$

where:
BEy – the Baseline Emission in year *y*, tCO2eq.;
Qy – the volume of the electricity supplied to the Grid in year *y* in Project Scenario, MWh;
PPER – the electricity loses coefficient in the Baseline scenario;
EFy – the carbon dioxide emission factor for the production of the electricity, supplied to the Grid in Ukraine in year *y*, tCO2eq./MWh;

$$PPER = VyblQybl \quad (2)$$

where:
PPER – the electricity loses coefficient in the Baseline scenario;
Vybl – factual transportation electricity loses in Baseline year (2002), MWh;
Qybl – the volume of the electricity supplied to the "LUGANSK ENERGY INTERCONNECTION" LLC Grid in the Baseline year (2002), MWh;

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

CAR06-CAR07, CL04 and their resolutions/conclusions applicable to Project baseline settings are listed in the Annex A (Table 2)

4.4 Additionality (27-31)

The most recent version of the "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 04.0.0) approved by the CDM Executive Board was used, in accordance with the JI specific approach, defined in paragraph 2(c) of the annex I to the "Guidance on criteria for baseline setting and monitoring". All explanations, descriptions and analyses are made in accordance with the selected tool.

The PDD provides a justification of the applicability of the approach.
Three alternative scenarios to the project activity were identified and proven to be in compliance with mandatory legislation and regulations taking into account the enforcement in the region and Ukraine. Project developer provides investment analysis, barrier analysis and common practice analysis.

Continuation of existing situation (alternative 1) was chosen as baseline scenario.

The program of "LUGANSK ENERGY INTERCONNECTION" LLC ⊓rid modernization is the program that has predecessors in Ukraine but could be considered as a common practice.

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

CAR08-CAR11 and their resolutions/conclusions applicable to Project additinality are listed in the Annex A (Table 2)

4.5 Project boundary (32-33)

The project boundaries were identified in a way to cover all GHG emissions associated with the project. With respect to "Luhansk Energy Interconnection" LLC organizational structure project boundaries include power transmitting lines and distribution substations with transformers, insulating, measuring and auxiliary equipment. Coal-burning TPPs, local distribution grids and fossil fuels are not directly included in the project boundaries.

The project boundaries were identified by project developer with account of "Luhansk Energy Interconnection" LLC operating facilities expansion.

The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants such as distribution substations with transformers, commutation, auxiliary and measuring equipment and transmitting lines (with wires, insulators, supporting towers etc) which is owned to the "Luhansk Energy Interconnection" LLC;

(ii) Reasonably attributable to the project such as electricity transmitted and lost in "Luhansk Energy Interconnection" LLC grids; and

(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO2 equivalent, whichever is lower.

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

Commutation equipment of "Luhansk Energy Interconnection" contains some amount of SF6. Project participants excludes SF6 fugitive emissions from the project frames for conservative reasons.

CAR12, CL05 and their resolution/conclusion applicable to the project boundaries are listed in the Annex A (Table 2)

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation of the project began, and the starting date is 17/07/2002, which is after the beginning of 2000 (The Order of the General Director of the

"Lugansk Energy Interconnection" LLC # 199 dated 17.07.2002 "On the Settlement of the plans for the Investment Program 2002 – 2003 implementation").

The PDD states the expected operational lifetime of the project in years and months, which is 20 years or 240 months.

The PDD states the length of the crediting period in years and months, which is 5 years (60 months), and its starting date as 01/01/2008, which is after the date the first emission reductions or enhancements of net removals are generated by the project.

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.

4.7 Monitoring plan (35-39)

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

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as statistic reporting forms, quality control (QC) and quality assurance (QA) procedures; detailed guidelines regulating the monitoring procedures and responsibilities; the operational and management structure that will be applied in implementing the monitoring plan.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. are clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as total value of transmitted electricity, value of technical losses, emission factor for electricity transmitting.

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, such as emission factor for electricity transmitting, baseline and project emissions, emission reductions.

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 electricity losses coefficient in baseline scenario

(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, such as absent.

(iii) Data and parameters that are monitored throughout the crediting period, such as emission factor for electricity transmitting, values of electricity transmitted through "Luhansk Energy Interconnection" grids and lost during transportation.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as electricity meters, calculations with different recording frequency such as continuously or monthly and electronic or paper recording method.

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

The Baseline emission is being calculated as follows:

$$BEy=Qy\times PPER\times EFy \quad (3)$$

where:
BEy – the Baseline Emission in year *y*, tCO2eq.;
Qy – the volume of the electricity supplied to the Grid in year *y* in Project Scenario, MWh;
PPER – the electricity loses coefficient in the Baseline scenario;
EFy – the carbon dioxide emission factor for the production of the electricity, supplied to the Grid in Ukraine in year *y*, tCO2eq./MWh;

$$PPER=Vybl/Qybl \quad (4)$$

where:
PPER – the electricity loses coefficient in the Baseline scenario;
Vybl – factual transportation electricity loses in year *y* in the Baseline Scenario, MWh;
Qybl – the volume of the electricity supplied to the Grid in year *y* in the Baseline Scenario, MWh;

The Project emission is being calculated as follows:

$$PEy = Vyp \times EFy \quad (3)$$

where

PEy – the Project Emission in year *y*, tCO2eq.;
Vyp – the volume of the electricity loses in year *y* in the Project scenario, MWh;
EFy – the carbon dioxide emission factor for the electricity transportation through the Ukrainian Electricity Grid in year *y*, tCO2eq./MWh;

The emission reductions achieved during the project period are calculated as a difference between annual baseline emission and annual project emission. It is shown by the formula:

$$ERy = BEy - PEy \quad (5)$$

where:
ERy – emission reductions achieved by the project activity in year *y,* tons of CO2/year;
BEy – baseline CO2 emission in year *y,* tons of CO2/year;
PEy – project CO2 emission in year *y,* tons of CO2/year.

The monitoring plan presents the quality assurance and control procedures for the monitoring process which are mentioned in the section D and Annex 3 of the PDD. This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The data required to JI monitoring is routinely collected within the normal operations of "Luhansk Energy interconnection" LLC therefore the JI monitoring is a part of routine monitoring. The data is complied in shift and day-to-day reports, monthly and year report and state report form 1B-TRE. All records a finally stored in the Power sales Department.

The monitoring plan will be implemented by different specialists of the "Luhansk Energy Interconnection" LLC under supervision of power sales department. All main departments and specialists of the enterprise will be involved into the preparation of monitoring report under coordination of the power sales department.

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

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

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

CAR13–CAR17, CL06 and their resolutions/conclusions applicable to Project monitoring plan are listed in the Annex A (Table 2)

4.8 Leakage (40-41)

Proposed project doesn't suggest transportation or usage of energy resources on-site, so leakages related to the project are equal to zero.

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

The PDD indicates assessment of emissions or net removals 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) Emission from the project (within the project boundary), which are 4 231 262 tonnes of CO2eq for period 01/01/2004-31/12/2007, 6 843 407 tonnes of CO2eq for period 01/01/2008-31/12/2012, 15 405 412 tonnes of CO2eq for period 01/01/2013-31/12/2023;

(b) Leakage, as applicable, which are 0 tonnes of CO2eq,

(c) Emission from the baseline scenario (within the project boundary) 7 363 053 tonnes of CO2eq for period 01/01/2004-31/12/2007, 13 318 748 tonnes of CO2eq for period 01/01/2008-31/12/2012, 30 335 349 tonnes of CO2eq for period 01/01/2013-31/12/2023

(d) Emission reductions adjusted by leakage (based on (a)-(b) above), which are 3 131 791 tonnes of CO2eq for period 01/01/2004-31/12/2007, 6 475 341 tonnes of CO2eq for period 01/01/2008-31/12/2012, 14 929 937 tonnes of CO2eq for period 01/01/2013-31/12/2023.

The estimates referred to above are given:

(a) On a annually basis;

(b) From 01/01/2003 to 31/12/2023, covering the whole crediting period;

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

(d) For CO2

(e) In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formula used for calculating the estimates referred above, which are the same than used for monitoring and described in the section 4.7 of this Report, are consistent throughout the PDD.

For calculating the estimates referred to above, key factors, e.g. electricity tariffs and availability, expected market development, etc, 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 were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as delivery substation logbooks, department reports, production forecasts are clearly identified, reliable and transparent.

Emission factors, such as emission factor for electricity transmitting in Ukraine grid, 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 annual average of estimated emission reductions or enhancements of net removals over the crediting period is calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period, and multiplying by twelve.

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.

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, if the analysis referred to above indicates that the environmental impacts are considered significant by the project participants or the host Party.

CAR18 and its resolutions/conclusions applicable to Project environmental impacts are listed in the Annex A (Table 2)

4.11 Stakeholder consultation (49)

The project has been presented to the Ukraine Government and to the local authorities as a Project Idea Note and later as a Project Design Document. No written project approvals have been obtained.
Actual Ukrainian legislation doesn't require stakeholders' consultation for the JI projects. Project owner did not inform local society by newspapers, public hearing or another way which is in compliance with Ukrainian legislation.

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 "The Reconstruction of the Electricity Grid of the "Lugansk Energy Interconnection" LLC. in order to lower the electricity transportation loses" Project in Luhansk Region, 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 participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides barrier analysis and, 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 written approval and the authorization by the host Party are obtainesd, it is our opinion that the project as described in the Project Design Document, Version 1.1 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 1.1) 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 "Eco-Elta" LLC that relate directly to the GHG components of the project.

/1/ Project Design Document "The Reconstruction of the Electricity Grid of the "Lugansk Energy Interconnection" LLC. in order to lower the electricity transportation loses" version 1.0 dated 25/08/2012
/2/ Project Design Document "The Reconstruction of the Electricity Grid of the "Lugansk Energy Interconnection" LLC. in order to lower the electricity transportation loses" version 1.1 dated 25/10/2012
/3/ Emission Reduction Calculation Excel-file "LuhOblEnergoERU.xls"
/4/ Letter of Endorsement #3674/23/7 dated 29/11/2012 issued by State Environment Investment Agency of Ukraine

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ Electricity balance and losses in "LEO" LLC in 2005 year (1B-TRE form)
/2/ Electricity balance and losses in "LEO" LLC in 2004 year (1B-TRE form)
/3/ Electricity balance and losses in "LEO" LLC in 2003 year (1B-TRE form)
/4/ Electricity balance and losses in "LEO" LLC in 2002 year (1B-TRE form)
/5/ Electricity balance and losses in "LEO" LLC in 2011 year (1B-TRE form)
/6/ Electricity balance and losses in "LEO" LLC in 2010 year (1B-TRE form)
/7/ Electricity balance and losses in "LEO" LLC in 2009 year (1B-TRE form)
/8/ Electricity balance and losses in "LEO" LLC in 2008 year (1B-TRE form)
/9/ Electricity balance and losses in "LEO" LLC in 2007 year (1B-TRE form)
/10/ Electricity balance and losses in "LEO" LLC in 2006 year (1B-TRE form)
/11/ Order#199 dated 17/07/2012 On investment program confirmation
/12/ Annex #1 for contract # У-222-04/384-42-204 dated 05/05/2004. Measuring equipment periodical calibration and examination time schedule for 2004 year.
/13/ Annex #1 to additional agreement #1 for contract #У-222-04/384-42-204 dated 05/05/2004. Measuring equipment periodical calibration and examination time schedule for 2004 year.
/14/ Annex #3 for contract # У-222-04/384-42-204. Measuring equipment periodical calibration and examination time schedule for 2005 year.
/15/ Annex #1 for contract #У-42659-2006/y-22-06. Measuring equipment periodical calibration and examination time schedule for 2006 year.
/16/ Annex #1 to additional agreement #1 for contract #42659-2006/y-22-06 dated 01/04/2006. Measuring equipment periodical calibration and examination time schedule for 2006 year.
/17/ Annex #5 to additional agreement #1 for contract #42659-2006/y-22-06. Measuring equipment periodical calibration and examination time schedule for 2007 year.
/18/ Annex #7 to additional agreement #1 for contract #42659-2006/y-22-06.

Measuring equipment periodical calibration and examination time schedule for December 2007 year.

/19/ Annex #8 to additional agreement #1 for contract #42659-2006/y-22-06. Measuring equipment periodical calibration and examination time schedule for 2008 year.

/20/ Measuring devices list, which must been calibrated in 2008 year

/21/ Annex #1 to contract #42332-2007. Measuring equipment periodical calibration and examination time schedule for 2007 year.

/22/ Annex #1 to contract #2-232-07. Measuring equipment periodical calibration and examination time schedule for 2007 year in Lysychansk branch.

/23/ Measuring devices list, which must been calibrated in 2008 year in Lysychansk branch

/24/ Measuring devices list, which must been calibrated in 2009 year

/25/ Annex #3 to contract # У-42-09/48172-2009 dated 4.01.2010. Measuring equipment periodical calibration and examination time schedule for 2010 year.

/26/ Annex #1 for additional agreement #4 for 03/04/2010. List of regulation documentation for measuring equipment

/27/ Annex #2 for additional agreement #4 for 03/04/2010. Contract work prices

/28/ Annex #3 to contract # У-42-09/48172-2009 dated 03/02/2009. Measuring equipment periodical calibration and examination time schedule for 2010 year.

/29/ Annex #3 for additional agreement #6 to contract # У-42-09/48172-2009 dated 03/02/2009. Measuring equipment periodical calibration and examination time schedule for 2010 year.

/30/ Annex #4 for additional agreement #7 to contract # У-42-09/48172-2009 dated 03/02/2009. Measuring equipment periodical calibration and examination time schedule for 2011 year.

/31/ Annex #3 for additional agreement #10 to contract # У-42-09/48172-2009 dated 03/02/2009. Measuring equipment periodical calibration and examination time schedule for 2011-January-February 2012.

/32/ Annex to contract #48031-2009/4-10-09 ated 13/02/2009. Measuring equipment periodical calibration and examination time schedule for 2009 year.

/33/ Annex #1 for contract # №4066/У-55-12 dated 13/02/2012. Measuring equipment periodical calibration and examination time schedule for 2012 year.

/34/ Statement on availability of conditions for measuring devices repairs. Dated 12/03/2009

/35/ Statement #899/4 on work standard three phase power meter CE6808 valid till 01/12/2012

/36/ Statement #899/4 on work standard calibration device CY6800I/3R #63017 valid till 23/12/2012

/37/ Statement on acceptance-transmittance KL0000187/2 dated 28/04/2011 aerial line 0,4 kV from TS-148 L-4

/38/ Statement on acceptance-transmittance KL0000557/2 dated 29/11/2011 aerial line 6 kV Substation Znamya Kommunizma – TS-110

/39/ Statement on acceptance-transmittance KL0000557/2 dated 29/11/2011 aerial line 6 kV Substation Znamya Kommunizma – TS-110

/40/ Statement on acceptance-transmittance dated 01/02/2011 aerial line 0.4 kV from TS-728 retrofit with wires SIP usage

/41/ Statement on acceptance-transmittance dated 08/2011 aerial line 0.4 kV from Box transformation substation-2709 retrofit
/42/ Statement on acceptance-transmittance dated 07/2011 aerial line 0.4 kV from Box transformation substation-3604 retrofit
/43/ Bill #4026 dated 14/05/2004 for consumed electricity for 10/04/2004-10/05/2004
/44/ Report on active electric energy usage for 14/04/2004-13/05/2004
/45/ Bill #69-K dated 27/01/2004 for consumed active electricity, calculations of reactive energy flows for January 2005 RMSE "Luhanskvoda"
/46/ Bill #936 dated 25/01/2006 for consumed electricity for 25/12/2005-25/01/2006
/47/ Report on active electric energy usage for 14/04/13/05/2004
/48/ Bill #143ks/2 for consumed electricity in February 2007
/49/ Report on active electric energy usage for 14/04/13/05/2004 business owner Okhtin S.P.
/50/ Bill #143ks/11/1 dated 25/11/2006 for consumed electricity in February 2007
/51/ Report on active electric energy usage in October 2008 business owner Okhtin S.P.
/52/ Bill #143ks/11/1 dated 20/11/2009 for consumed electricity in January 2009
/53/ Report on active electric energy usage by JSC "Stakhanovskyi ferro alloy plant" for 01/12/2009-01/01/2010
/54/ Report on active electric energy usage by JSC "Stakhanovskyi ferro alloy plant" for 01/12/2010-01/01/2011
/55/ Report on active electric energy usage by JSC "Stakhanovskyi ferro alloy plant" for 01/12/2011-01/01/2012
/56/ Report on active electric energy usage by JSC "Stakhanovskyi ferro alloy plant" in 01/10/2012-01/11/2012
/57/ Certificate #139 of electric inspection service controller Novikova O.B.
/58/ Certificate #1542 dated 10/12/2009 of ORBP foreman Klopov R.V.
/59/ Certificate #12789 dated 19/07/2012 of metering equipment exploitation group foreman Omelchenko E.N.
/60/ Certificate #196 dated 04/03/2010 of ORBP foreman Cherepakhin V.P.
/61/ Certificate #8781 dated 01/07/2009 of foreman Hlukhoverya T.G.
/62/ Certificate #7981 dated 09/09/2008 of air lines production department foreman Donchenko V.N.
/63/ Certificate #412 dated 12/09/2011 of head foreman Ivankov O.P.
/64/ Certificate #36/185 dated 01/02/2005 of Vres head foreman Kunakov V.N.
/65/ Certificate #41082 dated 19/07/2012 of foreman Ushakov S.N.
/66/ Certificate #7779 dated 03/08/2008 of air lines repair wireman Byelyh P.V.
/67/ Certificate #45081 dated 18/02/2005 of relay service wireman Lapchenko S.N.
/68/ Passport and calibration certificate on power meter LZQM111.02-534 prod. #64837, calibrated 02/08/2005
/69/ Passport and calibration certificate on power meter LO-3T5-1M1 prod. #150, calibrated 04/08/2004
/70/ Passport and calibration certificate on power meter LEO prod. #00006303, 09/11/2004
/71/ Passport and calibration certificate on power meter SOE-5020 prod. #0017029.

/72/ Passport and calibration certificate on power meter SOLO prod. #001269, April 2004

/73/ Passport and calibration certificate on power meter CE6803V prod. #49095056, October 2004

/74/ Passport and calibration certificate on power meter CE6803B prod. #4n109357, calibrated November 2004

/75/ Passport and calibration certificate on power meter CE6803B prod. #40029454, calibrated November 2004

/76/ Passport and calibration certificate on power meter ET3A557N8MT prod. #40029454, calibrated November 2004

/77/ Passport and calibration certificate on power meter Energiya-9 type STK1-10 prod. #0291, calibrated 29/12/2004

/78/ Passport and calibration certificate on power meter ST-EP prod. #000858, calibrated 12/07/2005

/79/ Passport and calibration certificate on power meter ACE-5000 prod. #27666, calibrated 16/11/2005

/80/ Passport and calibration certificate on power meter EMS 134.31.4 prod. #236663, calibrated 10/01/2005

/81/ Passport and calibration certificate on power meter Energiya-9 prod. #49470, calibrated 07/12/2005

/82/ Passport and calibration certificate on power meter CE6803V prod. #5n801782, calibrated November 2005

/83/ Passport and calibration certificate on power meter Meridian SOE-1.02.2 prod. #0333200, calibrated 16/12/2005

/84/ Passport and calibration certificate on power meter SO-EA09, calibrated 14/03/2005

/85/ Passport and calibration certificate on power meter CE6811 prod. #1656295, calibrated June 2005

/86/ Passport and calibration certificate on power meter Merkuriy 230 AR-03 prod. #00421534, calibrated 03/07/2005

/87/ Passport and calibration certificate on power meter NIK2012 prod. #0012647, calibrated 13/10/2006

/88/ Passport and calibration certificate on power meter NIK2301 prod. #000010, calibrated 05/09/2006

/89/ Passport and calibration certificate on power meter Energiya-9 CTK1-10K5 prod. #64570, calibrated 04/2006

/90/ Passport and calibration certificate on power meter CE6807B prod. #62080960, calibrated February 2006

/91/ Passport and calibration certificate on power meter CE6811 prod. #68817811, calibrated August 2006

/92/ Passport and calibration certificate on power meter Energiya-9 CTK1-10K5 prod. #34486

/93/ Passport and calibration certificate on power meter CE6807B prod. #68126655, calibrated October 2006

/94/ Passport and calibration certificate on power meter NP-06 TD ME.3F.TxPD-U prod. #565134, calibrated December 2007

/95/ Passport and calibration certificate on power meter NIK2102 prod. #0108927,

calibrated 01/11/2007

/96/ Passport and calibration certificate on power meter NIK2301 prod. #0108927, calibrated 26/03/2007

/97/ Passport and calibration certificate on power meter CO-6CC prod. #00506, calibrated 13/05/2007

/98/ Passport and calibration certificate on power meter Energiya-9 CTK1-10K5 prod. #166408 calibrated 01/2007

/99/ Passport and calibration certificate on power meter Energiya-9 CTK1-10K5 prod. #34486 calibrated 02/2007

/100/ Passport and calibration certificate on power meter NP-06 TD MME.1F.1SM-U

/101/ Passport and calibration certificate on power meter NP-06 TD MME.3FD.SMxPD-U

/102/ Passport and calibration certificate on power meter Kaskad-3.10/2.0-11 prod. #000394

/103/ Passport and calibration certificate on power meter Energiya-9 CTK1-10K5 prod. #166408 calibrated 01/2008

/104/ Passport and calibration certificate on power meter LZQJ-XC prod. #3436959 calibrated IV quarter of 2008

/105/ Passport and calibration certificate on power meter NP-06 TD MME.3FD.SMxPD-U calibrated 03/07/2010

/106/ Passport and calibration certificate on power meter Merkuriy 201 prod. #09583829, calibrated 22/11/2010

/107/ Passport and calibration certificate on power meter Energiya-9 CTK1-10K5 prod. #154073 calibrated 12/2010

/108/ Passport and calibration certificate on power meter MTX prod. #191110 4th quarter of 2010

/109/ Passport and calibration certificate on power meter ST-EA05D prod. #027145 2nd quarter of 2010

/110/ Passport and calibration certificate on power meter NIK2301 prod. #0100806, calibrated 22/04/2011

/111/ Passport and calibration certificate on power meter NIK2102 prod. #3513175, calibrated 26/09/2011

/112/ Passport and calibration certificate on power meter LZQM prod. #910435 calibrated 01/03/2011

/113/ Passport and calibration certificate on power meters LEO (136 things) calibrated 15/12/2011

/114/ Passport and calibration certificate on power meter ET3B6E8HLM8-20 prod. #41710 calibrated 02/02/2011

/115/ Passport and calibration certificate on power meter ET3B6E8HLM8-20 prod. #44066 calibrated 3rd quarter 2011

/116/ Passport and calibration certificate on power meter CE201S7145-1AZ prod. #009307047394901 calibrated 03/08/2011

/117/ Passport and calibration certificate on power meter CE302S33745 prod. #006901046393178 calibrated 04/07/2011

/118/ Passport and calibration certificate on power meter ST-EA08D

/119/ Passport and calibration certificate on power meter COEA09M2 prod. #402776, calibrated 3rd quarter 2011

/120/ Passport and calibration certificate on power meter LZQJ-XC prod. #3749264, calibrated 17.08.2012

/121/ Passport and calibration certificate on power meter NIK2301 prod. #0802169, calibrated 20/09/2012

/122/ Passport and calibration certificate on power meter NIK2301 prod. #0168575, calibrated 16/08/2012

/123/ Passport and calibration certificate on power meter NIK2301 prod. #4689667, calibrated 04/04/2012

/124/ Passport and calibration certificate on power meter CE101 S6 145 M6 prod. #007789053019176, calibrated 06/02/2012

/125/ Passport and calibration certificate on power meter COEA09M2 prod. #541611

/126/ Passport and calibration certificate on power meter ST-EA08D? calibrated 18/01/2012

/127/ Passport and calibration certificate on power meter CE6807B prod. #009131054003948, calibrated 1st quarter 2012

/128/ Passport and calibration certificate on power meter CE6807B prod. #201101001699, calibrated 12.01.2012

Persons interviewed:

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

/1/ Volodymyr Ivanovych Tkach– Director of "Luhansk Energy Interconnection" LLC

/2/ Denys Sergioyvych Beletskyi – head of "Luhansk Energy Interconnection" LLC planning-technical department

/3/ Maksym Ivanovych Rogovoi – representative of "Eco-Elta" LLC

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APPENDIX A: DETERMINATION PROTOCOL

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 project is **"**The Reconstruction of the Electricity Grid of the "Luhansk Energy Interconnection" LLC. in order to lower the electricity transportation loses.**"**	OK	OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scope is 2 Energy distribution	OK	OK
-	Is the current version number of the document presented?	The current version number is 1.0	OK	OK
-	Is the date when the document was completed presented?	The date when PDD version 1.0 was completed is 25/08/2012	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	The *project scenario* foresees implementation the electricity loses reduction measures at the transmission lines of the "Luhansk Energy Interconnection" LLC. The electricity loses	CAR01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	reduction measures at the transmission lines include the replacement of the power transformers with the installation of the more efficient ones (with the less loses coefficient), the replacement of the depreciated and outmoded parts of the transmission lines to increase their capacity and reduce the transportation electricity loses *CAR01* Please clearly indicate in the section A.2 situation existing before the project implementation and baseline scenario		
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of "Luhansk Energy Interconnection" LLC are provided in the section A.2 *CAR02* Please include in the section A.2 short history of the Project including its JI component	CAR02	OK
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	The project participants "Luhansk Energy Interconnection" LLC, Elta-Eco LLC from Ukraine and Carbontrading B.V. from the Netherlands are listed in the section A.3 *CL01* Please clarify role of Elta-Eco LLC in the project	CL01	OK
-	Is the data of the project participants presented in tabular format?	The data of the project participants is presented in a tabular format	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Is contact information provided in Annex 1 of the PDD?	The contact information of project participant and project developer 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?	The Host Party (Ukraine) is not indicated as a Party involved	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 proposed project is implemented on whole territory of Luhansk Region	OK	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	the project is implemented in whole territory of Luhansk Region	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?	The measures implemented by the project with relevant technical data are summarized in next follows - replacement of power transformers for those with lower loses - replacement of wires and cables for those with bigger capacity - installation of glass and polymer isolators - the replacement of 1- and 3-phase	CAR03 CL02 CL03	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		electricity meters for the new, more reliable electronic ones - The implementation of the Automatic Electricity Control and Accounting System *CAR03* Please provide project implementation schedule *CL02* Please clarify how new self-supported wires and insulating equipment installation will result to electricity losses reduction *CL03* Please indicate in the PDD if proposed project activity is not common practice in Ukraine electricity transmitting enterprises.		
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 main goal of the project is reduction of electric losses in power transmitting lines, that will reduce GHG emissions from fuel combustion during power production on heat power plants	OK	OK
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided. Total estimates for period 2004-2207 is 3 131 791 tonnes of CO2 equivalent and for period 2008-2012 6 475 341	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		tonnes of CO2 equivalent		
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	The estimated annual reduction for the period 2004-2007 is 1 295 068 tonnes of CO2 equivalent and for 2008-2012 1 357 267 tonnes of CO2 equivalent	OK	OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format	OK	OK
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	The length of crediting period is 5 years (60 months)	OK	OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	Estimates of total, annual and average annual emission reductions are provided in tonnes of CO2 equivalent	OK	OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	*CAR04* Please add information on Project Endorsement to the PDD *CAR05* Please provide written approvals from both parties involved	CAR04 CAR05	OK OK
19	Does the PDD identify at least the host Party as a "Party involved"?	The Host Party (Ukraine) is not indicated as a Party involved	OK	OK
19	Has the DFP of the host Party issued a written project approval?	See section 19 of this protocol	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
20	Are all the written project approvals by Parties involved unconditional?	This issue will be clarified after the determination process finish and obtainment of written approvals from parties involved	-	-
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?	After finishing of project determination report, the PDD with supporting documents and Determination Report will be presented to State Environmental Agency of Ukraine for receiving the Letter of Approval that will authorized project participants. Also, see section 19 and section 20 of this protocol above.	OK	OK
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The PDD explicitly indicates that JI specific approach is used for baseline identifying	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete	The PDD provides a detailed theoretical description of proposed baseline in a complete	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and transparent manner?	and transparent manner		
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, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs 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	The PDD provides justification of established baseline. (a) two plausible future scenarios are described (b) national and sectoral rules and policies were taken into account (c) the approaches, assumptions, methodologies, parameters, date sources and key factors that affect the baseline are taken into account (d) the uncertainties are taken into account and the conservative approach is used (e) the ERUs cannot be earned for decreasing of activity level outside the project or due to the force majeure. (f) list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring" was used *CAR06* Please provide additional alternative scenarios for two, proposed and described in the PDD *CAR07* Please move demonstration of additionality to the section B.2 of the PDD *CL04*	CAR06 CAR07 CL04	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	"Guidance on criteria for baseline setting and monitoring", as appropriate?	Please explain next follow in the section B.1 – the data of 2002 year was used for baseline establishing, and emission reductions was generated from 01/01/2004. Please explain elimination of data from 2003 year		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	There are no used selected elements of combinations of approved CDM methodologies or methodological tools for baseline setting.	OK	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	The PDD provides justification for chosen emission factor for electricity transported throw Ukraine national grid. The data for 2005-2007 years was taken from "Ukraine - Assessment of new calculation of CEF", approved by TUV SUD 17.08.2007. The data for 2008-2011 years was taken from relevant Orders of National Environment Investment Agency	OK	OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 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 PDD indicates that approach c) usage of "Combined tool to identify the baseline scenario and demonstrate additionality" version 4.0.0 was used for demonstration of additionality	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The justification of the applied approach was provided	OK	OK
29 (b)	Are additionality proofs provided?	The additionality proofs are provided *CAR08* Implementation of energy saving measures in frames of JI projects is common practice in Ukrainian energy transportation enterprises. Please provide more detailed information on proposed project barriers applicable to Luhansk Region specific *CAR09* Please provide more detailed description on tariff politic of National Electric energy regulating committee (NERC) *CAR10* Please provide comparing with similar JI projects which have been implemented in Ukraine. *CAR11* Proposed barrier "Necessity of the perpetual monitoring of places where the electricity is lost, their removal and prevention of their appearing" will be lowering in case of Alternative 2 implementation. Please correct or provide explanation	CAR08 CAR09 CAR10 CAR11	OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
29 (c)	Is the additionality demonstrated appropriately as a result?	The additionality was demonstrated		
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	The approach, explanations and analysis are provided in line 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 boundaries defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are under the control of the project participants and reasonably attributable to the project, such as electricity transmitting lines of "LEO" LLC with transforming, commutation, measuring and auxiliary equipment. *CAR12* In case of project energy saving measures implementation on new received equipment, project boundaries will be different from indicated in the determined PDD. Please remove list of equipment pertained to "LEO" LLc. *CL05* Luhansk Region is border with Russian federation. Please add explanation on electricity output and	CAR12 CL05	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		input of Ukraine borders		
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?	The project boundaries are defined on the basis of case-by –case analysis with regard to the criteria referred to in 32(a)	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?	The delineation of the project boundaries are appropriately described in the PDD with using a flow chart (see figure 4).	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?	Table 4 contains justification of inclusion or exclusion of GHG gases and sources related to the baseline and the project	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?	The PDD states that 06/06/2003 is the project starting date (according with Contract for the Working Project Development for the "Ilyich" Substation Reconstruction № 54-03-P493/2003)	OK	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes, the starting date is after 2000 year	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in	The expected operational lifetime of the project equipment stated in the PDD is 20 years or 240	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	years and months?	months		
34 (c)	Does the PDD state the length of the crediting period in years and months?	The PDD indicates length of crediting period in 5 years (60 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 01/01/2008 – the date when the first ERUs were 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?	The PDD states that the crediting period starts 01/01/2008 after the beginning of 2008 and does not extends beyond the operational lifetime of equipment	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? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The estimation of emission reduction due to the JI project is provided for the period 2004-2023. In the PDD the values of emission reductions during the period 2008-2012 are presented in table 4. The values of emission reductions for the period 2013-2023 are presented separately in table 5 of the PDD.	OK	OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach	The PDD explicitly indicates that JI specific approach was used for establishing the monitoring plan	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− Approved CDM methodology approach			
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 factors and characteristics that will be monitored, such as value of electricity losses in "LEO" LLC grids, value of input electricity, carbon emission factor (see section D.2 of the PDD)	OK	OK
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?	There is no constants and indicators used by project developer regarding JI project	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	The monitoring plan indicates that carbon emission factors for electricity transmission used as default values. The source of this value is clarified in table D.1.1.1 (reference to the section B.1), namely, Assessment of new calculation of CEF by TÜV SÜD Industrie Service GmbH for Ukraine and Orders ##43,62,63,75 of SEIA	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	transparent manner?			
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	Emission factor for electricity transmitting is assessed TÜV SÜD Industrie Service GmbH for JI projects in Ukraine for period 2005-2007 years and Orders of SEIA for period 2008-2012	OK	OK
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 clearly indicates the sources of which the required data are calculated. The data on factual energy losses and electricity input to the "LEO" LLC grid are taken from standard report form 1B-TRE	OK	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	*CAR13* Please specify the procedures to be followed if expected data are unavailable	CAR13	OK
36 (b) (iv)	Are International System Unit (SI units) used?	The international System unit are used	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	The monitoring plan doesn't note any parameters that are required for baseline calculations but obtained through monitoring	OK	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the	The parameters, coefficients, variables are used consistent between the baseline and the	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	baseline and monitoring plan?	monitoring plan		
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan is established in accordance with appendix B of "Guidance on criteria for baseline setting and monitoring" version 03	OK	OK
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?	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? (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	OK	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring	The monitoring plan describes the methods employed for data monitoring and recording	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(including its frequency) and recording?	including its frequency		
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?	Monitoring plan elaborates the formulae used for calculation and estimation of baseline emissions and project emission due to the JI project implementation.	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the formulae are explained	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Variables, equation formats subscripts are used in consistent way	OK	OK
36 (f) (iii)	Are all equations numbered?	All equations are numbered	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	All variables with units indicated are defined	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	The conservativeness of the algorithms are justified	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	*CL06* Please clarify uncertainty level in key parameters in table D.2 "Quality control and quality assurance procedures undertaken for data monitored".	CL06	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net	There is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline scenario.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	removals of the baseline ensured?			
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The all part of used formulae are explained	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	The consistency of the proposed procedures with the standard technical procedures in Ukraine Energy transportation sector is justified appropriately	OK	OK
36 (f) (vii)	Are references provided as necessary?	*CAR14* Please provide correct reference to The Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Order of State Supervision in the Power Industry" №189 dated 15.02.1999	CAR14	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	The key assumptions are explained in the PDD	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?	In the project design document there is not stated any information about significant uncertainty level of assumptions and procedures.	OK	OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the	See section 36 (f) (v) of this protocol	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	calculation of emission reductions or enhancements of net removals provided?			
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	The monitoring plan identifies national monitoring standard GKD 34.09.104-2003 applied to the project. The monitoring report provides reference to detailed description of proposed standard	OK	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Not applicable for given JI project.	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	*CAR15* Please indicate in the monitoring plan next follows - description of quality assurance and control procedures for the monitoring process; - information on power meters calibration (or reference to calibration plan); how monitored and required for ERUs calculation information will be kept and made available upon request	CAR15	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	*CAR16* Please clearly identify the responsibilities and the authorities regarding the monitoring activities	CAR16	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?	There are not JI projects with similar monitoring plan in Ukraine	OK	OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Presented in the PDD monitoring plan provides 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. Data connected with baseline scenario and emission reduction calculation are stated in tabular format in section D of the PDD.	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?	*CAR17* Please indicate in the section D that the data monitored and required for ERUs calculation will be kept during two years after the last ERUs transfer with reference on relevant order of "LEO" LLC	CAR17	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	No selected elements or combinations of approved CDM methodologies used for monitoring plan establishing	OK	OK
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 appropriately explain which sources of leakage are to be calculated and which can be neglected?	The PDD indicates in appropriately way that project activity doesn't connect with fuel burning or transportation and due the project implementation fuel consumption will lowered	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	See section 40 (a) of this protocol	OK	OK
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	The PDD indicates that assessment of emissions or net removals in the baseline scenario and in the project scenario	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions			
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 project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	The PDD provides ex ante estimates of (a) emissions for the project scenario, which is 4 231 262 tCO2eq for period 01/01/2004-31/12/2007, 6 843 407 tCO2eq for period 01/01/2008-31/12/2012, 15 405 412 tCO2eq for period 01/01/2013-31/12/2023 (b) emissions for the baseline scenario, which is 7 363 053` tCO2eq for period 01/01/2004-31/12/2007, 13 318 748 tCO2eq for period 01/01/2008-31/12/2012, 30 335 349 tCO2eq for period 01/01/2013-31/12/2023 (c) Emission reductions, which is 3 131 791 tCO2eq for period 01/01/2004-31/12/2007, 6 475 341 tCO2eq for period 01/01/2008-31/12/2012, 14 929 937 for period 01/01/2013-31/12/2023	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or	The approach 42(a) was chosen	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?			
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 CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the 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	a) The estimates are given on (i) on a yearly basis (ii) from 01/01/2003 till 31/12/2023 (iii) On a source-by-source/sink-by-sink basis - for each GHG, which are CH4 and CO2 - in tonnes of CO2 equivalent - using global warming potentials defined by decision 2/CP.3 (b) The formula used for calculating in 43 is consistent throughout the PDD (c) The key factors 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 for calculating estimates in 43 (d) The data sources used for calculating the estimates in 43 are clearly identified, reliable and transparent. (e) emission factors used for calculations in 43 are	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions	in line with National GHG Inventory Report approved by Ukrainian DFP (f) The estimations in 43 are based on conservative assumptions and the most plausible scenarios in a transparent manner (g) the estimates in 43 are consistent throughout the PDD (h) the annual average value of estimated emission reductions is calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	The calculations of the baseline emissions and project emissions are to be performed ex post. Also, in the PDD there are provided ex ante calculation of emissions. All estimated values are presented in section E of the PDD and Excel spreadsheets	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?	There are no significant environmental impacts of the project. The transboundary impacts are absent. *CAR18* Please mention environmental impacts assessment, which is a part of building documentation developing.	CAR18	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 supporting	See section 48(a) of this protocol	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	The actual Ukraine legislation doesn't require stakeholder's consultation for JI projects. The project was presented to the Government of Ukraine and to the Local Authorities as a Project Idea and, later, as the Technical Documentation. The Government and Local Authorities has approved the Project. All the comments received were positive	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
CAR01 Please clearly indicate in the section A.2 situation existing before the project implementation and baseline scenario	-	In the early 2000s the situation in the energy sector of Ukraine was quite bad. All the major generating and transmission equipment was in bad technical condition. The lack of financing lead to the equipment efficiency decrease. In the case of the electricity transportation it means the increase of the electricity loses in a grid during the transportation. So, the **Baseline Scenario** is that the efficiency of the electricity transportation through the "LUHANSK ENERGY INTERCONNECTION" LLC grid was getting lower and the electricity loses were rising constantly.	The issue is closed

		In this situation the Investment Program of the "Luhansk Energy Interconnection" LLC was settled and the Project implementation had started. The decision for the Project implementation was based on the information of the possibility of the Joint Implementation mechanism use for the partial investment refund. The Project foresees the implementation of the electricity loses reduction measures at the transmission lines of the "LUHANSK ENERGY INTERCONNECTION" LLC. as well as the electricity transportation and loses registration precision increase measures.	
CAR02 Please include in the section A.2 short history of the Project including its JI component	-	The short project history was added in the section A.2 of the PDD	The issue is closed
CAR03 Please provide project implementation schedule	-	project implementation timeline was provided	The issue is closed
CAR04 Please add information on Project Endorsement to the PDD	19	The Letter of Endorsement was provided to AIE	The issue is closed

CAR05 Please provide written approvals from both parties involved	19	Project written approvals are provided to AIE	The issue is closed
CAR06 Please provide additional alternative scenarios for two, proposed and described in the PDD	23	Third alternative scenario was added	The issue is closed
CAR07 Please move demonstration of additionality to the section B.2 of the PDD	23	Done	The issue is closed
CAR08 Implementation of energy saving measures in frames of JI projects is common practice in Ukrainian energy transportation enterprises. Please provide more detailed information on proposed project barriers applicable to Luhansk Region specific	29(b)	Additional information was added in the section B.1	The issue is closed
CAR09 Please provide more detailed description on tariff politic of National Electric energy regulating committee (NERC)	29(b)	Additional information was added in the section B.1	The issue is closed
CAR10 Please provide comparing with similar JI projects which have been implemented in Ukraine.	29(b)	Additional information was added in the section B.1	The issue is closed

CAR11 Proposed barrier "Necessity of the perpetual monitoring of places where the electricity is lost, their removal and prevention of their appearing" will be lowering in case of Alternative 2 implementation. Please correct or provide explanation	29(b)	Proposed barrier was eliminated	The issue is closed
CAR12 In case of project energy saving measures implementation on new received equipment, project boundaries will be different from indicated in the determined PDD. Please remove list of equipment pertained to "LEO" LLc.	32(a)	corrected	The issue is closed
CAR13 Please specify the procedures to be followed if expected data are unavailable	36 (b) (iii)	If the monitoring data is unavailable the calculation of the emission reduction interrupts and the all-necessary documents will be presented to the AIE, SEIA and JISC.	The issue is closed
CAR14 Please provide correct reference to The Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Order of State Supervision in the Power Industry" №189 dated 15.02.1999	36 (f) (vii)	The reference works correctly	The issue is closed

CAR15 Please indicate in the monitoring plan next follows - description of quality assurance and control procedures for the monitoring process; - information on power meters calibration (or reference to calibration plan); how monitored and required for ERUs calculation information will be kept and made available upon request	36 (i)	Additional information was added in the section D	The issue is closed
CAR16 Please clearly identify the responsibilities and the authorities regarding the monitoring activities	36 (j)	Scheme on monitoring data flow was corrected	The issue is closed
CAR17 Please indicate in the section D that the data monitored and required for ERUs calculation will be kept during two years after the last ERUs transfer with reference on relevant order of "LEO" LLC	36 (m)	All the data monitored and required for the ERUs calculation is available for the Project Developer, AIE and SEIA at the enterprise at all time (at least for two years after the last emission reductions transaction) – Order # 480 dated 27.11.2012.	The issue is closed
CAR18 Please mention environmental impacts assessment, which is a part of building documentation developing.	48 (a)	Done	The issue is closed

CL01 Please clarify role of Eco-Elta LLC in the project	-	Eco-Elta LLC was excluded from the project participants	The issue is closed
CL02 Please clarify how new self-supported wires and insulating equipment installation will result to electricity losses reduction	-	Clarification was added in the section A.4.2	The issue is closed
CL03 Please indicate in the PDD if proposed project activity is not common practice in Ukraine electricity transmitting enterprises.	-	Clarification was added in the section A.4.2	The issue is closed
CL04 Please explain next follow in the section B.1 – the data of 2002 year was used for baseline establishing, and emission reductions was generated form 01/01/2004. Please explain elimination of data from 2003 year	23	The emission reduction calculations was corrected	The issue is closed
CL05 Luhansk Region is border with Russian federation. Please add explanation on electricity output and input of Ukraine borders	32(a)	Clarification was added in the section B.3	The issue is closed
CL06 Please clarify uncertainty level in key parameters in table D.2 "Quality control and quality assurance procedures undertaken for data monitored".	36 (f) (v)	Done	The issue is closed