DETERMINATION REPORT
GLOBAL CARBON B.V.

DETERMINATION OF THE
"WIND PARK OCHAKOVSKIY"

REPORT NO. UKRAINE-DET/0392/2012

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BUREAU VERITAS CERTIFICATION

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DETERMINATION REPORT

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Client:	**Client ref.:**
Global Carbon B.V.	Lennard de Klerk

Summary:

Bureau Veritas Certification has made the determination of the "Wind Park Ochakovskiy" project of LLC "Vetrianoy park Ochakovskiy" located in Dmytrivka village, Mykolaiv 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 Actions 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.:	Subject Group:
UKRAINE-det/0392/2012	JI

Project title:
Wind Park Ochakovskiy

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1 INTRODUCTION

Global Carbon B.V. has commissioned Bureau Veritas Certification to determine its JI project “Wind Park Ochakovskiy” (hereafter called “the project”) at Dmytrivka village, Mykolaiv 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 emissions reductions units (ERUs).

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

1.2 Scope

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

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

1.3 Determination team

The determination team consists of the following personnel:

Svitlana Gariyenchyk
Bureau Veritas Certification Team Leader, Climate Change Verifier

Vladimir Kulish
Bureau Veritas Certification Team Member, Climate Change Verifier

Denis Pishchalov
Bureau Veritas Certification Team Member, Financial Specialist

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal technical reviewer

Julia Berdnikova
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 Global Carbon B.V. 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, Global Carbon B.V. revised the PDD and resubmitted it on 14/09/2012 as version 3.3, the former is deemed final.

The determination findings presented in this report relate to the project as described in the PDD version(s) 3.3.

2.2 Follow-up Interviews

On 10/11/2011 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 LLC "Vetrianoy park Ochakovskiy" and Global Carbon B.V. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
LLC "Vetrianoy park Ochakovskiy"	➢ Project history ➢ Project approach ➢ Project boundary ➢ Implementation schedule ➢ Organizational structure ➢ Project management organization ➢ Evidence and records on reconstruction and new equipment and its operation ➢ Environmental Impact Assessment ➢ Project monitoring responsibilities ➢ Monitoring equipment ➢ Personnel training ➢ Quality control and quality assurance procedures ➢ Environmental impacts affected ➢ Local authorities and public opinion
CONSULTANT: Global Carbon B.V.	➢ Applicability of methodology ➢ Baseline and Project scenarios ➢ Additionality justification ➢ Common practice analysis ➢ Monitoring plan ➢ Conformity of PDD to JI requirements ➢ Calculation of emission reduction

2.3 Resolution of Clarification and Corrective Action Requests

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

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 verification protocol in Appendix A.

3 PROJECT DESCRIPTION

The project is aimed at achieving GHG emission reductions by substituting the carbon intensive electricity from Ukrainian power grid with renewable energy produced by new wind power plant (WPP) which is built as a project activity. The new WPP with planned installed capacity of 300 MW is constructed in Mykolaiv region of Ukraine. It is planned to install in total 120 wind turbines 2.5 MW each. The project is realized in four stages comprised of installation of 10, 5, 9 and 96 wind turbines.

The purpose of the project is to generate environmentally friendly electricity with “zero” GHG emissions. The project will also support the Ukrainian Government’s objectives of:

- Facilitating and encouraging the development of new renewable energy sources with one of the key renewable technologies – wind.
- Reducing reliance of electricity and fossil fuel imports and developing indigenous power resources which will have added economic benefits.

Therefore, in the project scenario the electricity produced on this WPP will partly substitute the electricity from the Ukrainian electricity grid, decreasing respective carbon emissions from fossil fuel combustion on thermal power plants.

Overall, the realization of the project is environmentally and socially beneficial. The technological process is environmentally sound and does not require the use of hazardous materials. Operation of the project will lead to creation of new work places which will contribute to economic development of the region.

The identified areas of concern as to the project description, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 01 – CAR 09).

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 38 Corrective Action Requests and 04 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

The project has already been supported by the Government of the host Party (Ukraine), namely by the State Environmental Investment Agency of Ukraine, which has issued a Letter of Endorsement for the Project (Letter of Endorsement №2583/23/7 dated 14/09/2012).

Declaration of Approval with the number 2012JI05 was issued by the DFP of the Netherlands (State NL Agency Ministry of Economic Affairs, Agriculture and Innovation) on 20/02/2012.

Bureau Veritas Certification received this letters from the project participants and does not doubt its authenticity.

As for the time being no written approval for the project was issued by Ukrainian Party. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environmental Investment Agency of Ukraine, for receiving a Letter of Approval (LoA).

Bureau Veritas Certification considers the letter as unconditional in accordance with paragraphs 19 - 20 of the DVM.

The identified areas of concern as to project approvals by Parties involved, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 10).

4.2 Authorization of project participants by Parties involved (21)

The official authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written project approvals (refer to 4.1 above).

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

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.

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

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:
   a. *Scenario 1. Continuation of the current situation*

In Ukraine, thermal power plants (oil, natural gas, coal) account for nearly 46% of total electricity production, with nuclear power generating another 48%, while other sources, mainly hydroelectric power plants, make up the remaining 6.0%. The total installed generation capacity is 53,1 GW, which is more than enough to satisfy the current demand for electricity, albeit a big share of the thermal capacity is old and outdated (around 40 years in operation, on average) and is to be replaced rather in the nearest future. However, for some time, the Ukrainian power system may see no major changes in terms of new capacity being installed since the large overcapacity of thermal power plants is still operating in the system. This alternative suggests that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants

b. Scenario 2. *The proposed project activity undertaken without being registered as a JI project activity*
Ukraine has a significant wind potential which is currently barely exploited. This alternative suggests that the proposed wind park will be constructed without developing it as a JI project.

c. Scenario 3. *Construction of a new coal-fired power plant*
As Ukraine has substantial coal deposits, it is possible to replace existing fossil fuel plants with the new ones. However, the Ukrainian coal is costly to extract. It also requires transportation and preparation of coal. Coal fired power plant will also experience pressure from environmental groups as the large overcapacity of coal power plants exists in Ukraine. This alternative suggests that a new coal fired power plant will be constructed to produce electricity generated by the proposed project activity.

(b) 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. *Sectoral reform policies and legislation*.
On the 28th of September, 2008, the Ukrainian parliament passed laws introducing “green tariff” in Ukraine. “Green tariff” was defined as a special tariff at which electricity produced from the alternative sources of energy must be purchased. The introduced legislation, however, was vague and lacked the practical mechanisms for implementation. The suggested level of “green tariff” also did not allow for the reasonable return on possible investment.

b. *Economic situation/growth and socio-demographic factors in the relevant sector as well as resulting predicted demand.*
Demand for electric energy in Ukraine is expected to grow significantly according to the Energy Strategy of Ukraine for the period until 2030. However, main investments required to meet this demand will be channeled into the upgrades of transmission lines and rehabilitation of the thermal power plants and nuclear power plants.

c. *Availability of capital (including investment barriers)*.
Ukraine has been always considered a high-risk country for investments and doing business. Risks of doing business in Ukraine significantly impact the availability of capital in the country. Such projects are looking upon direct public financing or partnerships between private investors, international financial organizations and government. Large scale privately financed infrastructure projects in Ukraine are hard to come by.

d. *Local availability of technologies/techniques, skills and know-how and availability of best available technologies/techniques in the future.*
The proposed wind turbine generators of 2.5 MW scale have never before been installed in Ukraine. Most of the country's installed wind power is based on the 107.5 kW an 600 kW wind turbines that were produced locally under licenses from American and European manufacturers. Local production covered the needs of the governmental wind power development program that directly financed construction of the wind parks in Ukraine. Production of the larger single capacity wind turbines was attempted but never got out of the conceptual planning phase.

e. *Fuel prices and availability.*
In terms of fuel, Ukraine's primary energy consumption pattern has been historically dominated by natural gas 41% (39% in 2005) compared to the average of 21% for other world economies; Ukraine's average oil consumption has made up 19%, coal - 19%, uranium - 17%, and the consumption of hydro- and other renewable energy sources has totaled 4%. Over the period from 2000 to 2005, the energy dependence of Ukraine on imports of organic fuels, including conventionally primary nuclear fuel, was 60.7% compared with an average of 51% for the EU countries. Only supply of coal is not dependent on foreign sources, all other fuels are mostly imported. Prices are on the international level for oil and oil products and in the recent year the price of the natural gas imported from Russia has been pushed to the level of average European prices. The price of coal in Ukraine is low and does not compensate production costs in most of the cases.

f. *National and/or subnational expansion plans for the energy sector, as appropriate.*
The Energy Strategy of Ukraine for the period until 2030 does not emphasize the expansion of alternative energy and wind energy use in particular as the key growth and development area. The increasing demand for electric energy will be met by the commissioning of new and capacity improvements on the existing nuclear and thermal power plants mostly according to this document.

g. *National and/or subnational forestry or agricultural policies, as appropriate.*
According to Ukrainian Fifth National Communication on Climate Change, land distribution by types of land-use in Ukraine is the following: agricultural land (71%), forests (17.5%), built areas (4.1%), territories covered with water (4%), open wet lands (1.6%) and other (1.8%). Main regulatory documents in this field in Ukraine are Forestry Reformation and Development Concept, State Program "Forests of Ukraine"; Strategy for land-use and land-distribution in Ukraine is absent. The project is realized at numerous small plots of land, allocation of which was approved by the appropriate governmental institutions.

The identified areas of concern as to the baseline setting, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 12 - CAR 23).

4.4 Additionality (27-31)

Traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources or enhancements of net anthropogenic removals by sinks of GHGs was provided.

The PDD provides a justification of the applicability of the approach with a clear and transparent description, as per item 3.3 above.

Additionality proofs are provided. Three plausible and realistic alternative scenarios were identified in the project:

a. Continuation of the current situation
b. The proposed project activity undertaken without being registered as a JI project activity
c. Construction of a new coal-fired power plant

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

The identified areas of concern as to additionality, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination report (refer to CAR 24 – CAR 27 and CAR 38).

4.5 Project boundary (32-33)

The project boundary for this particular project is defined in line with the approach chosen regarding the baseline setting. Elements of the ACM0002 were used to define the project boundary. Applicability of the ACM0002 is discussed in the section B.1. of this PDD. According to ACM0002 the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the JI project power plant is connected to.

No outstanding issues were raised.

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 15/12/2010, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 28 years and 0 months or 336 months.

The PDD states the length of the crediting period in years and months, which is 28 years and 0 months or 336 months, and the date on which first emission reductions 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 are presented separately for those until 2012 in all relevant sections of the PDD.

No outstanding issues were raised.

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that the monitoring plan is established in accordance with appendix B of the JI guidelines and further guidance on baseline setting and monitoring developed by the JISC applying the elements of the monitoring methodology contained in the ACM0002.

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

- data to be monitored: as the project emissions according to the ACM0002 equals 0, the following two parameters for determining the baseline emissions are to be monitored:
  - Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the JI project activity in period *y*
  - Specific CO_2 emission factor for grid-connected thermal power plants electricity generation
- the period in which they will be monitored: continuously or/and monthly;
- all decisive factors for the control and reporting of project performance: project activity reports provided by the plant; quality control (QC) and quality assurance (QA) procedures; 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. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions to be monitored such as CO_2 emission factor for grid connected power generation.

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC, such as baseline emissions (BE_y), project emissions (PE_y), period (*y*), quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the JI project activity in period *y* ($EG_{PJ,y}$), specific CO_2 emission factor for grid-connected thermal power plants electricity generation ($EF_{grid,produced,y}$).

The monitoring plan explicitly and clearly distinguishes: data and parameters that are monitored throughout the crediting period, such as project emissions in period *y* (PE_y), quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the JI project activity in

period *y* ($EG_{PJ,y}$), specific CO_2 emission factor for grid-connected thermal power plants electricity generation ($EF_{grid,produced,y}$).

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions or direct monitoring of emission reductions from the project, leakage, as appropriate, such as:

Baseline emissions:

$$BE_y = EG_{PJ,y} \times EF_{grid,produced,y}, \quad \text{(Equation 1)}$$

where:

BE_y - Baseline emissions in period *y* (tCO_2e);

$EG_{PJ,y}$ - Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the JI project activity in period y, MWh;

$EF_{grid,produced,y}$ - specific CO_2 emission factor for grid-connected thermal power plants electricity generation, tCO_2/MWh.

Project emissions:

According to the ACM0002 for the wind power generation project activities

$$PE_y = 0, \quad \text{(Equation 2)}$$

where:

PE_y - Project emissions in period y (tCO_2e).

Emission reduction:

$$ER_y = BE_y - PE_y \ . \quad \text{(Equation 3)}$$

where:

ER_y - Emission reductions in period y (tCO_2e);

BE_y - Baseline emissions in period y (tCO_2);

PE_y - Project emissions in period y (tCO_2e).

The monitoring plan presents the quality assurance and control procedures for the monitoring process. The data measured are used for the commercial transactions of the company, therefore they are well verified. Cross check measurement results with records for sold electricity will be done periodically. Monitoring techniques are in line with current operation routines at the enterprise.

It is indicated in the monitoring plan that data monitored and required for verification in accordance with the applied ACM0002 methodology are to be kept for two years after the last transfer of ERUs for the project.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities; they are presented in sufficient detail in PDD Section D.

On the whole, the monitoring report 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.

The identified areas of concern as to monitoring plan, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 29 – CAR 35, CL 02, CL 03).

4.8 Leakage (40-41)

According to the ACM0002 no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emissions sources are neglected.

No outstanding issues were raised.

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

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

The PDD provides the ex-ante estimates of:
(a) Emissions for the project scenario (within the project boundary), are equal to zero according to the ACM0002 for the wind power generation project activities.

(b) Leakage that are considered to be equal zero.

(c) Emissions for the baseline scenario (within the project boundary), which are:

118 093 tones CO_2 for the period 2011-2012;
23 997 984 tones CO_2 for the period 2013-2039.

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are:
118 093 tones CO_2 for the period 2011-2012;
23 997 984 tones CO_2 for the period 2013-2039.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 01/12/2011 to 31/12/2039, covering the whole crediting period;

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

(d) For each GHG gas that in accordance with the ACM0002 methodology is CO_2;

(e) In tones of CO_2.

The formula used for calculating the estimates referred above, which are provided in section D above are consistent throughout the PDD.

For calculating the estimates referred to above, key factors mentioned in Section B.1. of the PDD influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as the State Environmental Investment Agency of Ukraine (DFP in Ukraine) are clearly identified, reliable and transparent.

Specific grid emission factor was selected by carefully balancing accuracy and reasonableness, and appropriately justified 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 over the crediting period is calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

The identified areas of concern as to estimation of emission reductions, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 36, CL 04).

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, in accordance with procedures as determined by the host Party, such as State Construction Standard DBN A.2.2.-1-2003: "Structure and Contents of the Environmental Impact Assessment Report (EIR) for Designing and Construction of Production Facilities, Buildings and Structures".

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.

It is stated in the PDD that the wind power plants with internal electricity transmission cables do not present the types of activities or facilities which present an increased environmental hazard. The operation of WPP with internal electricity transmission lines does not produce waste and does not cause particle or liquids emissions into the environment, and does not result in non-reversible or critical changes in the atmo-, hydro-, or lithospheres.

The project has no transboundary impacts.

The identified areas of concern as to environmental impacts, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 37).

4.11 Stakeholder consultation (49)

Information about plans to launch the project was published in newspaper "Yuzhnaya Pravda" #131 on 14/09/2010. Project participants have also organized meetings with the local stakeholders during the project development period. Specifically, such meeting has been organized on 23/08/2011.

No negative comments were received during the public hearings. PDD will be made publicly available for the global stakeholder meeting commenting period and any comments received will be taken into account.

No outstanding issues were raised.

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 "Wind Park Ochakovskiy" Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases:

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

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

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party.

If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Versions 3.3 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the Project Design Documentation 3.3 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 Type the name of the company that relate directly to the GHG components of the project.

/1/ Project Design Document “Wind Park Ochakovskiy” version 3.0 dated 14/10/2011
/2/ Financial Indicators Calculation version 3.0 excel file
/3/ Emission Reductions Calculation version 3.0 excel file
/4/ Project Design Document “Wind Park Ochakovskiy” version 3.1 dated 24/02/2012
/5/ Emission Reductions Calculation version 3.1 excel file
/6/ Project Design Document “Wind Park Ochakovskiy” version 3.2 dated 24/02/2012
/7/ Financial Indicators Calculation version 3.2 excel file
/8/ Project Design Document “Wind Park Ochakovskiy” version 3.3 dated 14/09/2012
/9/ Emission Reductions Calculation version 3.3 excel file
/10/ Financial Indicators Calculation version 3.3 excel file
/11/ Letter of Endorsement №2583/23/7 on the JI project “Wind Park Ochakovskiy” dated 14/09/2012, issued by State Environmental Investment Agency of Ukraine
/12/ Declaration of Approval with the number 2012JI05 was issued by the DFP of the Netherlands (State NL Agency Ministry of Economic Affairs, Agriculture and Innovation) on 20/02/2012

Category 2 Documents:

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

1. Working project of “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”
2. Agreement # 32 dated 20/10/2011 on inventory services
3. Environmental impact assessment at the stage of land allocation 28.00.000-OBOC, 29.00.000-OBOC
4. Environmental impact assessment of the working project 0227.00.000-OBOC
5. Information note # 231 dated 14/06/2011 on summarized climate characteristics, issued by Mykolaiiv Regional Centre for Hydrometeorology (MRCH)

6. Statement of intent on construction of ten Fuhrländer FL2500-100 wind turbines
7. Instruction on EIA materials design of the object “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”
8. Newspaper article dated 13-19 July 2011 on construction of the object “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”
9. Map of the regions with the highest wind potential
10. Expert opinion 48.01.123.895.11 dated 12/05/2011 on conformity of the project design to the health and safety regulations, issued by the Mykolaiiv Expert and Technical Centre of the State Service of Mining Supervision and Industrial Safety of Ukraine
11. Technical conditions # 02/27-184 dated 30/06/2011, valid for 2 years, on cogeneration unit connection to the power grid
12. Expert opinion # 11B157794.40.10.559-E dated 10/06/2011 on conformity of the object to the energy efficiency regulations, issued by the Mykolaiiv Region Territorial Administration of the State Energy Efficiency Inspection
13. Statement # 1 on goods acceptance-transmitting as per Additional agreement # 1 to the Agreement # 10a dated 04/10/2010
14. Letter # 01-04/3845-05 dated 21/07/2011, issued by the State Mykolaiiv Region Environmental Administration
15. Positive opinion # 01/294 dated 08/08/2011 of complex state expert analysis of working project “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”, issued by the Ukrainian State Construction Expertise State Enterprise Branch in Mykolaiiv Region
16. Permit on construction works execution # MK11411028669 dated 15/08/2011, issued by the State Architectural and Building Control Inspection in Mykolaiiv Region
17. Negative opinion # 15-00142-11 dated 10/06/2011 of complex state expert analysis of working project “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”, issued by the Ukrainian State Construction Expertise State Enterprise Branch in Mykolaiiv Region
18. Letter # 69/4897/04 dated 09/09/2011 on existence of sufficient

infractions during the construction of Ochakiv Wind Power Plant Dmytrivka wind park, issued by the State Inspectorate for Technogenic Safety Administration in Mykolaiiv Region

19. Statement dated 06/09/2011 on conformity to the fire safety regulations, issued by the State Fire Safety Inspection Administration of Ministry of Emergencies of Ukraine in Mykolaiiv Region
20. Annex dated 06/09/2011 on conformity to the fire safety regulations, issued by the State Fire Safety Inspection Administration of Ministry of Emergencies of Ukraine in Mykolaiiv Region
21. Letter # 69/4187/54 dated 04/08/2011 on providing the proposals to the project design
22. Expert dated 03/08/2011 study statement on project design conformity to the valid fire safety regulations and standards
23. Conclusion of the State Fire Safety Inspection Administration of Ministry of Emergencies of Ukraine in Mykolaiiv Region
24. Conclusion # 69/2582 dated 24/05/2011 of the Administration of Ministry of Emergencies of Ukraine in Mykolaiiv Region
25. Check list for receiving the technical conditions for the design of the object “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”
26. Showcase of the project “The first stage of Ochakiv Wind Power Plant with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity” for the period 22-28 August
27. Land lease agreement # 1 dated 29/06/2011
28. Cost calculation for installation of first stage (1st ten turbines) one wind turbine at “Vetrianoy park Ochakovskiy” LLC
29. List of personnel of “Vetrianoy park Ochakovskiy” LLC
30. Contract # 3003/2 dated 20/06/2011 on execution of contracted works
31. Additional agreement # 1 dated 01/08/2011 to the Contract # 3003/2 dated 20/06/2011 on execution of contracted works
32. Main contract # 18 dated 20/06/2011
33. Additional agreement # 1 dated 20/06/2011 to the Main contract # 18 dated 20/06/2011
34. Main contract # 19 dated 25/06/2011
35. Additional agreement # 1 dated 25/06/2011 to the Main contract # 19 dated 25/06/2011
36. Additional agreement # 2 dated 25/06/2011 to the Main contract # 19 dated 25/06/2011

37. Additional agreement # 3 dated 04/08/2011 to the Main contract # 19 dated 25/06/2011
38. Additional agreement # 4 dated 09/08/2011 to the Main contract # 19 dated 25/06/2011
39. Additional agreement # 5 dated 12/08/2011 to the Main contract # 19 dated 25/06/2011
40. Additional agreement # 6 dated 23/08/2011 to the Main contract # 19 dated 25/06/2011
41. Additional agreement # 7 dated 12/09/2011 to the Main contract # 19 dated 25/06/2011
42. Additional agreement # 8 dated 12/09/2011 to the Main contract # 19 dated 25/06/2011
43. Additional agreement # 9 dated 29/09/2011 on making amendments to the Additional agreement # 3 to the Main contract # 19 dated 25/06/2011
44. Additional agreement # 16 dated 03/11/2011 to the Main contract # 19 dated 25/06/2011
45. Additional agreement # 14 dated 25/10/2011 to the Main contract # 19 dated 25/06/2011
46. Contract price on the construction of “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity” in 2011
47. Photo–general plan of “The first stage of Ochakiv Wind Power Plant Dmytrivka wind park with 25 MW capacity in Ochakiv district, Mykolaiiv region, by construction of ten Fuhrländer FL2500-100 wind turbines with 2500 kW capacity”
48. Photo–substation
49. Photo–wind turbines control panel
50. Photo–automatic safety panel

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/	Mykolay Konovalov	Lawer, LLC “Wind Park Ochakovskiy”
/2/	Olga Ursulova	Estimator Department of Capital Construction, LLC “Wind Park Ochakovskiy”
/3/	Olga Kovalenko	Finance director, LLC “Wind Park Ochakovskiy”
/4/	Petr Kharchenko	Head of section, LLC “Wind Park

		Ochakovskiy”
/5/	Viktor Agulov	Chief Power Engineer, LLC “Wind Park Ochakovskiy”
/6/	Anna Vilde	JI Consultant, Global Carbon B.V.

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APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

CHECK LIST FOR DETERMINATION, ACCORDING JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (VERSION 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The title of the project is: "Wind Park Ochakovskiy"	OK	OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scope is: (1) Energy industries (renewable/non-renewable sources)	OK	OK
-	Is the current version number of the document presented?	PDD Version 3.3	OK	OK
-	Is the date when the document was completed presented?	PDD dated 14/09/2012	OK	OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	PDD Section A.2 reads: The project is aimed at construction and operation of the new WPP with a total installed capacity of not less than 300 MW in Mykolaiv Region of Ukraine by the company LLC "Wind Park Ochakovskiy" to generate environmentally sound electricity with "zero" GHG emissions.	OK	OK
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of the project (incl. its JI component) is briefly summarized. *Corrective Action Request 01* Section A.2. of the Guidelines for users of the JI PDD form version 4 requires to briefly summarize the history of the project (including its JI component), please update the section.	CAR 01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Party(ies) and project participants involved in the PDD are listed as follows: Party A: Ukraine and its legal entity LLC "Wind Park Ochakovskiy" ; - Party B: the Netherlands and its legal entity Global Carbon B.V.	OK	OK
-	Is the data of the project participants presented in tabular format?	The data of the project participants are presented in due tabular format.	OK	OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD.	OK	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Ukraine is indicated as a Host Party.	OK	OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Mykolaiv Region	OK	OK
-	City/Town/Community etc.	Village of Dmytrivka	OK	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	Geographical coordinates of the project site are: 46°38'35.81"N 31°46'33.72"E	OK	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	PDD Section A.4.2 provides some relevant technical data of main equipment installed and actions to be implemented by the project. *Corrective Action Request 02* Please, transfer the implementation schedule from Section A.2. to Section A.4.2. *Corrective Action Request 03* Please, provide a schedule of commissioning / decommissioning of wind turbine (with monthly data) and correct the data in Section E of expected emission reductions, taking into account this schedule.	CAR 02 CAR 03 CAR 04	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 04 Please, provide links to the documents regulations specified and indicating the number of applicable documents: - European Machine Directive - Germanischer Lloyd (GL) specifications		
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)	Section A.3 reads: Emission reductions, therefore, are generated by the project through the displacement of grid electricity that is associated with the CO_2 emissions in fossil fuel fired power plants by the greenhouse gas emissions-free electricity generated by the wind power plant.	OK	OK
-	Is it provided the estimation of emission reductions over the crediting period?	Yes, the estimation of emission reductions over the crediting period is provided.	OK	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	Estimated annual reduction for the chosen credit period is provided in tCO_2e.	OK	OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format. Refer to Tables 2 and 3.	OK	OK
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	Length of the crediting period: 28 years or 336 months. Length of the part of crediting period within the first commitment period of the Kyoto Protocol: 1 year and 1 months or 13 months. Length of the part of crediting period after the first commitment period of the Kyoto Protocol: 21 years and 11 months or 263 months. *Corrective Action Request 05* Please, provide documentary evidence of the chosen length of the loan period with the explanation of this term, and make the appropriate corrections to the PDD.	CAR 05 CAR 06 CAR 07 CAR 08	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 06 On page 28 in section C the duration of the crediting period after the first commitment period of Kyoto Protocol specified as 26 years and 11 months does not correspond to the information specified in section A.4.3.1; please, adjust the sections C and A.4.3.1 considering CAR 05. *Corrective Action Request 07* There is a mistakenly indicated value in Table 2 in the line «Total estimated emission reductions over the crediting period». Please, adjust it. *Corrective Action Request 08* There is a mistakenly indicated value in Table 3 in the line «Total estimated emission reductions over the crediting period». Please, adjust it.		
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent are provided in accordance with the calculated values in the spreadsheet provided to the verifier. *Corrective Action Request 09* While visiting company the information about the change of plan implementation and increase the number of wind turbine unit that will be installed has been received. Please, make appropriate changes throughout the text of the PDD and, please, recalculate emission reductions that are expected of the project.	CAR 09	OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	*Corrective Action Request 10* The project has no written approvals by the Parties involved.	CAR 10	pending

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		The project approval by the Host Party will be provided after the determination statement is issued by the AIE.		
19	Does the PDD identify at least the host Party as a "Party involved"?	Neither of two Parties are identified as a "Party involved".	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Refer to CAR 10	OK	OK
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.	OK	OK
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?	*Corrective Action Request 11* The project participants LLC "Wind Park Ochakovskiy" and Global Carbon B.V. are not authorized by the Parties involved in the project. The project participants will be authorized with the issue of the written project approvals.	CAR 11	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	It is stated that a baseline for the JI project is set in accordance with Appendix B to decision 9/CMP.1 (JI guidelines), and with further Guidance on Criteria for Baseline Setting and Monitoring (version 02) (hereinafter referred to as Guidance) as well as the use of the elements of the approved CDM baseline and monitoring methodology "Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 12.1.0" which is the latest version at the time of setting the baseline for this project. The use of the elements of the ACM0002 methodology is justified through the assessment of the methodology's applicability criteria. (Refer to Table 4 of the PDD)	CAR 12 CAR 13	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 12 Please update Table 4. «Applicability criteria of the ACM0002» according to the project being implemented. *Corrective Action Request 13* According to information available on http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L there is a new valid version of the document ACM0002 12.2.0. Please, during the development of a new version of the PDD consider these changes.		
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	A detailed theoretical description in a complete and transparent manner is provided for the applied JI specific approach. It includes: - an in-depth justification of the baseline chosen in accordance with the Guidance on Criteria for Baseline Setting and Monitoring (version 02); - detailed theoretical description of the baseline methodology in a complete and transparent manner in accordance with the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 12.1.0"; - an assessment of applicability of the Methodology chosen for the baseline setting.	OK	OK
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	Baseline is established: (a) By listing and describing three realistic and credible alternative scenarios to the project activity. (b) Taking into account relevant national and/or sectoral policies and circumstance regarding alternative energy production (refer to Section B.1. PDD) as well as key appropriate factors that affect a baseline, such as:	CAR 14 CAR 15 CAR 16 CAR 17 CAR 18 CAR 19 CAR 20	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 "Guidance on criteria for baseline setting and monitoring", as appropriate?	- economic situation/growth; - socio-demographic factors in the wind power sector; - availability of capital for the project implementation; - tariffs; - local availability of project technologies and techniques; - skills and know-how regarding wind power plants; - fuel prices and its availability. (c) The baseline is established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors. The project participants use elements of the approved CDM baseline and monitoring methodology ACM0002 to establish the baseline. All assumptions, parameters, data sources and key factors are referenced by the reputable sources. (d) Taking into account the uncertainties and using conservative assumptions. The project participants followed all the elements of the approved CDM baseline and monitoring methodology ACM0002 to establish the baseline. All data necessary to establish the baseline were taken from open and publicly available sources. The emission factor chosen to establish the baseline is calculated based on conservative assumptions: - the grid emission factor is calculated based on actual activity data of the thermal power plants, grid operator and electricity supply companies - simple operating margin calculation method has been used for emission factor calculation; - the emissions of methane and nitrous oxide have not taken into consideration, which is in line with ACM0002. (e) in such a way that ERU's cannot be earned for decreases in activity levels outside the project activity or due to force majeure. The project activity suggests that emission reductions will be earned only for the amount of electricity generated and delivered to the grid from the renewable source such as wind energy.	CAR 21 CAR 22	

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 14 Please, specify version of the document «Tool to calculate the emission factor for an electricity system» applied, page 11. *Corrective Action Request 15* The specified link #16 http://www.bank.gov.ua/Publication/stat/data/12-stat-release_interest% 20rates.pdf is not available; please, adjust the link. *Corrective Action Request 16* The data presented (for Germany) does not correspond to those published on the website (link 17). Please, update the data and link. *Corrective Action Request 17* Please, provide the correct link #18 for the data source «compares country risk premiums for Russia and Ukraine» *Corrective Action Request 18* The specified link #20 http://www.mvp.gov.ua/mvp/control/uk/publish/article?art_id=79920&cat_id=52294 is not available. Please, adjust this link. *Corrective Action Request 19* Please, provide the correct link #26 for the 0035 project "Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko" *Corrective Action Request 20* Please, provide the correct link #29 for «Carbon emission factors for the years 2008, 2009, 2010 and 2011" *Corrective Action Request 21* Please, provide the correct full name $EF_{grid,produced,y}$ page 19 according to the order of the NATIONAL ENVIRONMENTAL INVESTMENT AGENCY OF UKRAINE # 75 from 12.05.11		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 22 Please, specify links number ## 14, 19, 21 with indication of the section that contains information on the related link.		
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?	The selected elements or combinations together with the elements supplementary developed by the project participants are in line with 23 above. *Corrective Action Request 23* At the time of setting the baseline (06/10/2011) the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 12.1.0 was used. According to the information from the official site http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L) the valid version at that time was 12.2.0. The period of its validity is from 17 September 2010 till present. Please, make due corrections.	CAR 23	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	Specific carbon dioxide non direct emissions factor for consumption of electricity generated by power stations of united energy system of Ukraine approved by the DFP of Ukraine (National Environmental Investment Agency of Ukraine) has been selected.	OK	OK
Approved CDM methodology approach only_ Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that	As suggested by paragraph 2 (c) of the Annex 1 of the Guidance and by the ACM0002, the most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board is used to demonstrate additionality.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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".			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The applicability of the ACM0002 is assessed and justified in Section B.1. *Corrective Action Request 24* Approach selected for determination of appropriate analysis method is correct. Benchmark analysis is the proper method of analysis for the present project. The developer calculates the project NPV using the real discount rate derived from the sum of risk-free rate + sum of the risk premiums adjusted for inflation. While the approach is correct in general it is obvious that the developer employs the return on equity rate instead of WACC. As the ROE is applied instead of WACC it means that the whole project to be financed through the equity. In order to justify the benchmark I kindly ask you to provide the documentary evidence confirming that all stages of the project are financed solely from the equity investment without bank loans bonds and other forms of debt.	CAR 24 CAR 25 CAR 38	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 25 Financial model while calculating operational cash flow does not account for maintenance expenses. Please correct the formulas in the main project scenario and deviation scenarios. *Corrective Action Request 38.* Please note that as per you response to CAR 05 the service lifetime of the project equipment is 25 years. I kindly ask you to apply this lifetime when calculating residual value of the project assets.		
29 (b)	Are additionality proofs provided?	*Corrective Action Request 26* Please clarify how the liquidation value of the project facilities has been calculated as the formulas in financial model are missing.	CAR 26	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	To prove additionality investment analysis of the project activity without JI registration, barrier and common practice analysis were applied. Investment analysis is performed on excel spreadsheet made available to AIE, in terms of calculation of the project NPV and determining the economic attractiveness of the project without and with JI registration. The discount rate for the NPV calculation equal 21.41% was estimated. The analysis shows that for the used input data and without JI registration the project NPV < 0. The sensitivity analysis of ±10% changes in total investment costs and electricity production shows that the results of financial analysis stated above are robust. Barrier analysis strengthens the additionality argument by listing technological barriers preventing the project implementation. The project activity is asserted an innovative project in the Ukrainian wind power industry as this project is the first of its kind in Ukraine. All in all, a conclusion is made in PDD that the GHG emission reductions generated by the project are additional to those that might otherwise occur.	CAR 27	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 27 Please correct sensitivity scenario 3 as it accounts for simultaneous increase of investment expenses and increase of sales, while it is supposed to account only for increase of the investment costs		
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	All explanations, descriptions and analyses are made in accordance with the selected tool.	OK	OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary for this particular project is defined in line with the approach chosen regarding the baseline setting. Elements of the ACM0002 were used to define the project boundary. According to ACM0002 the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the JI project power plant is also connected to.	OK	OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	Section B.3 provides reasonable information on the project boundary, gases and their sources.	OK	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated. All exclusions made are appropriate as a conservative or justified by the ACM0002 methodology. According to the ACM0002 no leakage emissions are considered. The	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emissions sources are neglected.		
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	Starting date of the project is 15/12/2010. This is the date of signing the contract to develop the project. *Clarification Request 01* Please, provide information on obtaining a license for electricity generation.	CL 01	OK
34 (a)	Is the starting date after the beginning of 2000?	Refer to 34 (a).	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The operational lifetime of the project is 28 years or 336 months.	OK	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	Yes, length of the crediting period stated is 28 years or 336 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?	Start of the crediting period: 01/12/2011 which is the date after the first stage realization the project and 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?	*Corrective Action Request 28* The credit period defined as from 01/12/2011 till 2034 inclusive is longer than the period of the project (as indicated in the Excel file), which is 20 years. Explain this, please.	CAR 28	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	The status of emission reductions or enhancements of net removals generated by JI projects after the end of the first commitment period of the Kyoto Protocol may be determined by any relevant agreement under the UNFCCC.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	2012?			
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated that the monitoring plan is established in accordance with appendix B of the JI guidelines and further guidance on baseline setting and monitoring developed by the JISC applying the elements of the monitoring methodology contained in the ACM0002.	OK	OK
JI specific approach only				

36 (a)	Does the monitoring plan describe:
	− All relevant factors and key characteristics that will be monitored?
	− The period in which they will be monitored?
	− All decisive factors for the control and reporting of project performance?
		The monitoring plan describes:
		- data to be monitored: as the project emissions according to the ACM0002 equals 0, the following two parameters for determining the baseline emissions are to be monitored:
		  - quantity of net electricity generation that is produced and fed into the grid;
		  - CO_2 emission factor in the production of electricity by thermal power plants connected to the United Energy System of Ukraine
		- the period in which they will be monitored: continuously or/and monthly;
		- all decisive factors for the control and reporting of project performance;
		- project activity reports provided by the plant;
		- quality control (QC) and quality assurance (QA) procedures;
		- the operational and management structure that will be applied in implementing the monitoring plan.
		
		Corrective Action Request 30
		It was revealed during the site visit, as well as it's mentioned in the PDD, that monitoring will be carried out monthly. Accordingly, units for the parameters values must be provided per month, not per year. Please, check this and make due corrections.
		
		Corrective Action Request 31
		Please, provide passports and certificates of the state calibration of
			CAR 29
			CAR 30
			CL 02
				OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		electrical meters. *Clarification Request 02* Please, clarify why emissions obtained during the construction phase are excluded from the calculations.		
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?	Specific carbon dioxide non direct emissions factor for consumption of electricity generated by power stations of united energy system of Ukraine approved by the DFP of Ukraine.	OK	OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	Refer to the above paragraph 36 (b)	OK	OK
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?	N/A	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 precise references from which these default values are taken (Official information of NEIA) N/A for conservativeness of the values.	OK	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if	N/A	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	expected data are unavailable?			
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units 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 notes a parameter that is used to calculate baseline emissions based on monitored data of quantity of net electricity generation.	OK	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is consistency between parameters and used in baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring".	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?	Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes: (i) N/A (ii) N/A. iii) Refer to 36 (a).	OK	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The methods used (electricity meters within the automated system for commercial metering of electricity on-site) and data collection frequency (continuously or monthly) and recording (electronic/paper) are clearly defined in the monitoring plan	CAR 31	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 31 Please, provide documented information on data collection and records keeping procedures, as well as their storage, backup and restore, if necessary.		
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?	Yes, these are formulae: (D.1.1.1) – (D.1.1.2) for project emissions, (D.1.1.3) – (D.1.1.4) for baseline emissions, (D.1.4) for emission reduction.	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Yes, the underlying rationale for the algorithms/formulae is presented	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	All variables and equation formats are consistent and used in appropriate 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?	Yes, all variables with units indicated are defined	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/A	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty level in key parameters identified as low in table D.2 “Quality control and quality assurance procedures undertaken for data monitored”.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the monitoring plan and on spreadsheet.	OK	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	All formulae are clearly explained	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Yes, the monitoring is in line with current operational routines.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (f) (vii)	Are references provided as necessary?	References for documents required for ERUs calculation are provided	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions presented in a transparent manner and 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 PDD no information about significant uncertainty level of assumptions and procedures is provided.	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 calculation of emission reductions or enhancements of net removals provided?	The quantity of electricity exported and the quantity of electricity imported will be measured by electric meters. The data measured are used for the commercial transactions of the company, therefore they are well verified. Cross check measurement results with records for sold electricity will be done periodically.	OK	OK
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?	No national or international monitoring standard are used for monitoring of the JI project implementation.	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 the 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?	QC/QA procedures are outlined in PDD Section D.2. *Corrective Action Request 32* Please, provide documented information about the internal QA/QC procedures of the enterprise. *Corrective Action Request 33* Please, elaborate and provide to AIE Calibration plan of the JI project measurement equipment.	CAR 32 CAR 33	OK
36 (j)	Does the monitoring plan clearly identify the	The operational and management structure that the project	CL 03	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	responsibilities and the authority regarding the monitoring activities?	participants will implement in order to monitor emission reduction generated by the project is described in sufficient detail in PDD Section D.3. *Clarification Request 03* Please, explain what the abbreviation SCADA in Figure 5 "Operational and Management Structure stands for or provide a reference for its full name as a footnote. *Corrective Action Request 34* Operational and Management structure with assigned roles and responsibilities must be officially documented and communicated to the personnel involved in the monitoring procedure.	CAR 34	
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?	Monitoring techniques are in line with current operation routines at the enterprise.	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?	Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions.	OK	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	The monitoring methodology contained in ACM0002 requires that all data collected as part of monitoring should be archived electronically and kept at least for 2 years after the end of the last crediting period. *Corrective Action Request 35* Please, provide documented information on how the information collected during monitoring will be stored.	CAR 35	OK
37	If selected elements or combinations of	The selected elements or combination, together with elements	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	supplementary developed by the project participants are in line with 36 above.		
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?	According to the ACM0002 no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emissions sources are neglected.	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	According to the information and justification stated in the PDD, leakage is absent. Please, refer to section B.3 of the PDD.	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 removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	The project activity will use Option (a) - Assessment of emissions or net removals in the baseline scenario and in the project scenario. *Clarification Request 04* Please, explain the origin of figures and calculation algorithm for the data presented in Section E, as well as in the excel calculation spreadsheet. Were the estimations provided there made on real data or any expert investigations? (References must be provided). Provide an example of estimation for any year/years of the crediting period	CL 04	OK
43	If the approach (a) in 42 is chosen, does the	(a) Project emissions according to the ACM0002 equal zero;	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	(b) N/A; (c) Emissions for the baseline scenario (Section E.4); (d) N/A		
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A	OK	OK
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions	(a) Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tonnes of CO_2, on a source-by-source basis, for CO_2 as per the ACM0002 (b) The formulae used in PDD are consistent. (c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate. (d) Data sources used for calculating the estimates are clearly identified, reliable and transparent. (e) Default value of grid emission factor is taken from identified sources. (f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner. (g) Estimates in 43 are consistent throughout the PDD. (h) The annual average of estimated emission reductions calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 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?	Illustrative ex-ante estimation of emission reduction is made on the excel spreadsheet made available to AIE. No calculation errors were observed with a reservation concerning CL 04. *Corrective Action Request 36* In Section E the template format has been changed. Please, adjust it.	CAR 36	OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	PDD Section F.1 provides data showing that the wind power plants with internal electricity transmission cables do not present the types of activities or facilities which present an increased environmental hazard. The operation of WPP with internal electricity transmission lines does not produce waste and does not cause particle or liquids emissions into the environment, and does not result in non-reversible or critical changes in the atmo-, hydro-, or lithospheres. The project has no transboundary impacts. *Corrective Action Request 37* Please, provide the correct name for the Ministry of Environment/ Ministry of Environmental Protection on p.38 of the PDD	CAR 37	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 documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	The environmental impacts are not considered significant by the host Party. Section F.2 describes the most important impact of the project on the environment. All anticipated environmental effects and mitigation measures described in EIA.	OK	OK
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?	Meetings with the local stakeholders during the project development period were organized by the project participants. No negative comments were received during the public hearings.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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
Corrective Action Request 01 Section A.2. of the Guidelines for users of the JI PDD form version 4 requires to briefly summarize the history of the project (including its JI component), please update the section.	-	History of the project (including its JI component) was added to Section A.2. PDD version 3.1: "Before project implementation, territories under project boundary were used for cattle pasture. The idea of wind park was under discussion from 2004. Substantial investments needed for wind turbines purchasing and installation disabled project onset. The project has been initiated in 2010. First line of WPO was commissioned in December 2011 and by now second stage of project construction is being in progress. The Joint Implementation mechanism (JI) was one of the drivers for the project from the start and financial benefits provided by the JI mechanism were considered as one of the reasons to start the project and are crucial in the decision to start the operations. The process of applying for all necessary permits to build, operate and maintain the wind power plant has been initiated by LLC "Vetrianoy park Ochakovskiy" in 2010. Preparation of the business plan has also commenced at that time taking into account JI mechanism as a source of additional project cash-flow."	Issue is closed.

Corrective Action Request 02 Please, transfer the implementation schedule from Section A.2. to Section A.4.2.	-	Implementation schedule was moved from Section A.2. to Section A.4.2. in PDD version 3.1.	Issue is closed.
Corrective Action Request 03 Please, provide a schedule of commissioning / decommissioning of wind turbine (with monthly data) and correct the data in Section E of expected emission reductions, taking into account this schedule.	-	Schedule of commissioning was added to PDD version 3.1 (section A.4.2) and calculation file. Emission reductions were recalculated accordingly, figures in Section A.4.3.1. and Section E were changed.	Issue is closed.
Corrective Action Request 04 Please, provide links to the documents regulations specified and indicating the number of applicable documents: - European Machine Directive - Germanischer Lloyd (GL) specifications	-	This relates to safety systems used in wind turbines and is not important for the JI project description. References to European Machine Directive, Germanischer Lloyd (GL) specifications were removed from PDD version 3.1.	Issue is closed.
Corrective Action Request 05 Please, provide documentary evidence of the chosen length of the loan period with the explanation of this term, and make the appropriate corrections to the PDD.	-	According to Glossary of Joint Implementation Terms, Version 03: "Operational lifetime of a project is the period during which the project is in operation." The project will be in operation as long as the equipment installed under the project activity is operational. Since this equipment is new time of its operation is assumed to be equal to its technical lifetime, which for onshore wind turbines in accordance with "Tool to determine the remaining lifetime of equipment", Version 01, is 25 years. The relevant changes were made to section A.4.3.1, parts C and E of PDD version 3.1, and calculation file.	Issue is closed.

Corrective Action Request 06 On page 28 in section C the duration of the crediting period after the first commitment period of Kyoto Protocol specified as 26 years and 11 months does not correspond to the information specified in section A.4.3.1; please, adjust the sections C and A.4.3.1 considering CAR 05.	-	The information in section A.4.3.1 was adjusted. Section C is in correspondence with the answer on CAR 05.	Issue is closed.
Corrective Action Request 07 There is a mistakenly indicated value in Table 2 in the line «Total estimated emission reductions over the crediting period». Please, adjust it.	-	Values in Table 2 were adjusted.	Issue is closed.
Corrective Action Request 08 There is a mistakenly indicated value in Table 3 in the line «Total estimated emission reductions over the crediting period». Please, adjust it.	-	Values in Table 3 were adjusted.	Issue is closed.

<table>
<tr>
<td><u>Corrective Action Request 09</u>
While visiting company the information about the change of plan implementation and increase the number of wind turbine unit that will be installed has been received. Please, make appropriate changes throughout the text of the PDD and, please, recalculate emission reductions that are expected of the project.</td>
<td>-</td>
<td>The amendments in calculations and in PDD were made (Section A.2 and A.4.2).The project activity is planned to be implemented in four stages:
<table><tr><td>First stage:</td><td>It is planned to install 10 wind turbines 2.5 MW each. Total installed capacity 25 MW. Commissioning in December 2011.</td></tr><tr><td>Second stage:</td><td>It is planned to install 5 wind turbines 2.5 MW each. Total installed capacity 12.5 MW. Expected commissioning in May 2012</td></tr><tr><td>Third stage</td><td>It is planned to install 9 wind turbines 2.5 MW each. Total installed capacity 22.5 MW. Expected commissioning in October 2012</td></tr><tr><td>Fourth stage:</td><td>It is planned to install 96 wind turbines 2.5 MW each. Total installed capacity 240 MW. Expected commissioning is during 2013-2014.</td></tr></table>Implementation plan, documented and signed by director of LLC “Wind Park Ochakovskiy”, is provided to AIE.</td>
<td>Issue is closed.</td>
</tr>
<tr>
<td><u>Corrective Action Request 10</u>
The project has no written approvals by the Parties involved.
The project approval by the Host Party will be provided after the determination statement is issued by the AIE.</td>
<td>19</td>
<td>The project was authorized with the Letter of Approval by Netherlands Agency issued on 20/02/2012. Document is provided to AIE. Letter of Approval by SEIA will be provided after determination.</td>
<td>Issue is not closed.</td>
</tr>
<tr>
<td><u>Corrective Action Request 11</u>
The project participants LLC “Wind Park Ochakovskiy” and Global Carbon B.V. are not authorized by the Parties involved in the project.
The project participants will be authorized with the issue of the written project approvals.</td>
<td>21</td>
<td>The project was authorized with the Letter of Approval by Netherlands Agency issued on 20/02/2012. Document is provided to AIE . Letter of Approval by SEIA will be provided after determination.</td>
<td>Issue is not closed.</td>
</tr>
</table>

Corrective Action Request 12 Please update Table 4. «Applicability criteria of the ACM0002» +according to the project being implemented.	22	The proposed project activity is installation of a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant)	Issue is closed.
Corrective Action Request 13 According to information available on http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L there is a new valid version of the document ACM0002 12.2.0. Please, during the development of a new version of the PDD consider these changes.	22	The amendment incorporates applicability conditions on how the methodology shall be applied in cases where the project activity includes hydropower plant(s) with multiple reservoirs. The project activity is the installation of new wind power plant. The number of the version has been changed through the text of PDD.	Issue is closed.
Corrective Action Request 14 Please, specify version of the document «Tool to calculate the emission factor for an electricity system» applied, page 11.	23	Mentioned version of the «Tool to calculate the emission factor for an electricity system» 02.2.1 – was not used. Section B1: "Project participants used all the elements of this methodology in order to establish the baseline, demonstrate additionality and establish the monitoring plan for this project except for the use of "Tool to calculate the emission factor for an electricity system"	Issue is closed.
Corrective Action Request 15 The specified link #16 http://www.bank.gov.ua/Publication/stat/data/12-stat-release_interest% 20rates.pdf is not available; please, adjust the link.	23	The correct link is provided. See link #18, Section B.	Issue is closed.
Corrective Action Request 16 The data presented (for Germany) does not correspond to those published on the website (link 17). Please, update the data and link.	23	The correct data and link is provided. See link #19, Section B.	Issue is closed.
Corrective Action Request 17 Please, provide the correct link #18 for the data source «compares country risk premiums for Russia and Ukraine»	23	The correct data and link is provided. Please, see link #20 http://pages.stern.nyu.edu/~adamodar/, table "Data Sets", line "Discount rate estimation", line "Risk premiums for other markets"	Issue is closed.

Corrective Action Request 18 The specified link #20 http://www.mvp.gov.ua/mvp/control/uk/publish/article?art_id=79920&cat_id=52294 is not available. Please, adjust this link.	23	Data on this link was available on 05/02/2012. The price 1 ton of coal produced by the state enterprises in 2009 can be confirmed by the following link: http://www.google.com.ua/url?sa=t&rct=j&q=%D0%B6%D0%BE%D0%B2%D1%82%D0%B5%D0%BD%D1%8C%202009%20%D0%B2%D1%83%D0%B3%D1%96%D0%BB%D0%BB%D1%8F%20442%2C3%20%D0%B3%D1%80%D0%BD&source=web&cd=2&sqi=2&ved=0CCsQFjAB&url=http%3A%2F%2Fwww.ier.com.ua%2Ffiles%2Fpublications%2FPolicy_papers%2FGerman_advisory_group%2F2009%2FPP_09_2009_ukr.pdf&ei=M1RGT5_bC8jEswbHp4GGCw&usg=AFQjCNGA42Fp4zEBcVN-X72znvaOWLwbaA&sig2=vRWHyl8sfaxKaHTABFZeOw&cad=rja	Issue is closed.
Corrective Action Request 19 Please, provide the correct link #26 for the 0035 project "Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko"	23	The correct link 26 for the 0035 project "Utilization of Coal Mine Methane at the Coal Mine named after A.F. Zasyadko" #28 is provided	Issue is closed.
Corrective Action Request 20 Please, provide the correct link #29 for «Carbon emission factors for the years 2008, 2009, 2010 and 2011"	23	The correct links are provided. See reference #21.	Issue is closed.
Corrective Action Request 21 Please, provide the correct full name $EF_{grid,produced,y}$ page 19 according to the order of the NATIONAL ENVIRONMENTAL INVESTMENT AGENCY OF UKRAINE #75 from 12.05.11	23	Correct full name of the parameter according to the order of the NATIONAL ENVIRONMENTAL INVESTMENT AGENCY OF UKRAINE #75 from 12/05/11: $EF_{grid,produced,y}$ - specific CO_2 emission factor for grid-connected thermal power plants electricity generation	Issue is closed.
Corrective Action Request 22 Please, specify links number ##14, 19, 21 with indication of the section that contains information on the related link.	23	Information in links #16, 21 and 23 is specified. See section B.1.	Issue is closed.

Corrective Action Request 23 At the time of setting the baseline (06/10/2011) the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 12.1.0 was used. According to the information from the official site http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L) the valid version at that time was 12.2.0. The period of its validity is from 17 September 2010 till present. Please, make due corrections	24	The amendment incorporates applicability conditions on how the methodology shall be applied in cases where the project activity includes hydropower plant(s) with multiple reservoir. The title of methodology was changed through the text of PDD.	Issue is closed.
Corrective Action Request 24 Approach selected for determination of appropriate analysis method is correct. Benchmark analysis is the proper method of analysis for the present project. The developer calculates the project NPV using the real discount rate derived from the sum of risk-free rate + sum of the risk premiums adjusted for inflation. While the approach is correct in general it is obvious that the developer employs the return on equity rate instead of WACC. As the ROE is applied instead of WACC it means that the whole project to be financed through the equity. In order to justify the benchmark I kindly ask you to provide the documentary evidence confirming that all stages of the project are financed solely from the equity investment without bank loans bonds and other forms of debt.	29 (a)	The letter, which indicates that the project is financed only from proprietary funds is provided to AIE.	Issue is closed.

Corrective Action Request 25. Financial model while calculating operational cash flow does not account for maintenance expenses. Please correct the formulas in the main project scenario and deviation scenarios.	29 (a)	Maintenance expenses were neglected. This is conservative.	Issue is closed.
Corrective Action Request 26 Please clarify how the liquidation value of the project facilities has been calculated as the formulas in financial model are missing.	29 (b)	Liquidation value for each year has been calculated as depreciation value, for 10 years. Please, see last version of calculation model.	Issue is closed.
Corrective Action Request 27. Please correct sensitivity scenario 3 as it accounts for simultaneous increase of investment expenses and increase of sales, while it is supposed to account only for increase of the investment costs .	29 (c)	The links on corresponding values in calculations of Scenario 3 and Scenario 4 sensitivity analysis were corrected. Please, see CF calculation sheet. Table 8 in PDD was amended by inserting correct values in Scenario 3 and Scenario 4. In Scenario 1 investment costs are decreasing on 10%.	Issue is closed.
Corrective Action Request 28 The credit period defined as from 01/12/2011 till 2034 inclusive is longer than the period of the project (as indicated in the Excel file), which is 20 years. Explain this, please.	34 (d)	See answer on the CAR 05	Issue is closed.
Corrective Action Request 29 It was revealed during the site visit, as well as it's mentioned in the PDD, that monitoring will be carried out monthly. Accordingly, units for the parameters values must be provided per month, not per year. Please, check this and make due corrections.	36 (a)	The indexes of parameters have been changed through the text of the PDD.	Issue is closed.
Corrective Action Request 30 Please, provide passports and certificates of the state calibration of electrical meters.	36 (a)	Passports and state calibration of two power meters SL 7000 Smart #53118345 and #55118309 are provided to AIE. Calibration period for power meters SL 7000 Smart is 6 years.	Issue is closed.

Corrective Action Request 31 Please, provide documented information on data collection and records keeping procedures, as well as their storage, backup and restore, if necessary.	36 (e)	Monitoring instruction which includes operational and management structure, data collection and records keeping procedures, QA/QC procedures with assigned roles and responsibilities is documented and provided to AIE.	Issue is closed.
Corrective Action Request 32 Please, provide documented information about the internal QA/QC procedures of the enterprise.	36 (i)	Monitoring instruction which includes operational and management structure, data collection and records keeping procedures, QA/QC procedures with assigned roles and responsibilities is documented and provided to AIE.	Issue is closed.
Corrective Action Request 33 Please, elaborate and provide to AIE Calibration plan of the JI project measurement equipment.	36 (i)	Calibration plan is provided to AIE	Issue is closed.
Corrective Action Request 34 Operational and Management structure with assigned roles and responsibilities must be officially documented and communicated to the personnel involved in the monitoring procedure.	36 (j)	Monitoring instruction which includes operational and management structure, data collection and records keeping procedures QA/QC procedures with assigned roles and responsibilities is documented and provided to AIE.	Issue is closed.
Corrective Action Request 35 Please, provide documented information on how the information collected during monitoring will be stored.	36 (m)	The order for terms of data collecting is provided to AIE	Issue is closed.
Corrective Action Request 36 In Section E the template format has been changed. Please, adjust it.	46	The template format in Table was corrected. See section E.6.	Issue is closed.
Corrective Action Request 37 Please, provide the correct name for the Ministry of Environment/ Ministry of Environmental Protection on p.38 of the PDD	48 (a)	The correction was made. See Section F1 of the PDD (second paragraph)	Issue is closed.

Corrective Action Request 38. Please note that as per you response to CAR 05 the service lifetime of the project equipment is 25 years. I kindly ask you to apply this lifetime when calculating residual value of the project assets.		The corrections were made. Please, see new version of the PDD and CF.	Issue is closed.
Clarification Request 01 Please, provide information on obtaining a license for electricity generation.	34 (a)	The decision of issuance of the license for energy generation for "Wind Park Ochakovskiy" was obtained 28.11.2011, #2269. License is valid from 28.11.2011 till 27.11.2031. The License was issued 01/12/2011 by Head of the National Commission on Regulation of Energy Generation", S. Titenko.	Issue is closed.
Clarification Request 02 Please, clarify why emissions obtained during the construction phase are excluded from the calculations.	36 (a)	According to methodology ACM0002, version 12.2.0, page 11 , emissions obtained during the construction are neglected.	Issue is closed.
Clarification Request 03 Please, explain what the abbreviation SCADA in Figure 5 "Operational and Management Structure" stands for or provide a reference for its full name as a footnote.	36 (j)	SCADA (supervisory control and data acquisition) generally refers to industrial control systems (ICS): computer systems that monitor and control industrial, infrastructure, or facility-based processes	Issue is closed.
Clarification Request 04 Please, explain the origin of figures and calculation algorithm for the data presented in Section E, as well as in the excel calculation spreadsheet. Were the estimations provided there made on real data or any expert investigations? (References must be provided). Provide an example of estimation for any year/years of the crediting period	42	Estimation based on study of electricity output for the first stage. Average power output of 10 turbines was used as for forecasting energy yields from other turbines which are to be installed under the project. Sum of the expected power outputs from a number of operating turbines was divided by number of days in the year and multiplied by number of days in operation in each of the years.	Issue is closed.