



DETERMINATION REPORT

LLC “WIND PARK NOVOAZOVSKIY”

DETERMINATION OF THE “WIND PARK NOVOAZOVSKIY IN UKRAINE”

REPORT NO. UKRAINE-DET/0309/2011

REVISION No. 01

BUREAU VERITAS CERTIFICATION



DETERMINATION REPORT

Date of first issue: 30/09/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: LLC "Wind Park Novoazovskiy"	Client ref.: Mr. Oleksandr Prygornitsky

Summary:
Bureau Veritas Certification has made the determination of the "Wind Park Novoazovskiy in Ukraine" project of LLC "Wind Park Novoazovskiy" located in village of Bezimmenne of the Donetsk Region of 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 Requests, Corrective Actions Requests and Forward Action Requests (CL, CAR and FAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

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

Report No.: UKRAINE-det/0309/2011	Subject Group: JI
Project title: "Wind Park Novoazovskiy in Ukraine"	
Work carried out by: Igor Kachan - Team Leader, Lead Verifier Oleg Skoblyk - Team Member, Lead Verifier Svitlana Gariyenchyk - Team Member, Verifier Denis Pishchalov - Financial Specialist	
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Work approved by: Flavio Gomes - Operational Manager	
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1 INTRODUCTION

LLC “Wind Park Novoazovskiy” has commissioned Bureau Veritas Certification (BVC) to determine its JI project “Wind Park Novoazovskiy in Ukraine” (hereafter called “the project”) in village of Bezimenne of the Donetsk Region of 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:

Igor Kachan

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Oleg Skoblyk

Bureau Veritas Certification Team Member, Climate Change Lead Verifier



Svitlana Gariyenchyk
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) version 1.0 submitted by LLC “Wind Park Novoazovskiy” on 17/05/2011 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 Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be checked by an Accredited Independent Entity were reviewed.



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To address Bureau Veritas Certification corrective action and clarification requests, LLC “Wind Park Novoazovskiy” revised the PDD and resubmitted it on 02/09/2011 as version 2.0 and on 29/09/2011 as version 2.1, the former is deemed final.

The determination findings presented in this report relate to the project as described in the PDD version 2.1.

2.2 Follow-up Interviews

On 21/07/2011 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 “Wind Park Novoazovskiy” 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 “Wind Park Novoazovskiy”	<ul style="list-style-type: none"> ➤ Implementation schedule ➤ 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.	<ul style="list-style-type: none"> ➤ Applicability of methodology ➤ Baseline and Project scenarios ➤ Additionality justification ➤ Common practice analysis ➤ Monitoring plan ➤ Conformity of PDD to JI requirements

2.3 Resolution of Clarification and Corrective Action Requests

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



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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 construction and operation of the new WPP with a total installed capacity of not less than 107.5 MW in Donetsk Region of Ukraine by the company LLC “Wind Park Novoazovskiy”. The development anticipates the installation of 43 advanced wind turbines (with rated capacity of 2.5 MW) depending on the selected manufacturer and wind turbine type, construction of access roads and maintenance base as well as the construction of electricity infrastructure (WPP substation, cable lines, overhead transmission lines).

The purpose of the project is to generate environmentally sound 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.

The technological process is environmentally sound and does not require the use of hazardous materials.

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 03, CAR 17, CL 01).

4 DETERMINATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 18 Corrective Action Requests, 06 Clarification Requests and 01 Forward Action Request.

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

4.1 Project approvals by Parties involved (19-20)

After finishing JI project determination report, the PDD and Determination Report will be presented to State Environmental Investments Agency of Ukraine (SEIA) for receiving the Letter of Approval (LoA).

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

4.2 Authorization of project participants by Parties involved (21)

The participation of each project participant listed in the PDD will be authorized by Letter of Approval from appropriate party explicitly stating the name of the legal entity.

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



The project has no approvals by the Parties involved, therefore CAR 01 and CAR 02 remain pending. These issues will be closed after evidencing letter presentation before report finalizing.

4.3 Baseline setting (22-26)

The PDD explicitly indicates 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.

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. 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
- (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. A comprehensive analysis and an in-depth description of the sectoral reform policies and legislation concerning the development of the world as well as the Ukrainian energy sector, including the alternative power, is provided by the project participants (Refer to documents #36-43, #53, #55 listed in Section 7 References, Category 2 Documents of the present Report);
 - b. Describing economic situation the project participants state that 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;
- c. As far as availability of capital there is a summary of key indicators of business practices in Ukraine as well as a comparison country risk premiums for Russia and Ukraine provided by the PP's vividly demonstrating that Ukraine has been always considered a high-risk country for investments and doing business, which in its turn significantly impacts the availability of capital in the country.
 - d. It is stated in the PDD that the project under consideration is the first of its kind and scale in Ukraine;
 - e. PDD provides the proportion of organic fuels consumed in Ukraine compared to the ones in EU countries which shows that Ukraine's average consumption of renewable energy sources has totalled 4%. (For more detailed review of the fuels availability and their prices refer to Section B.1. and footnotes # 24 and # 25).

The identified areas of concern as to the baseline setting, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CL 05, CAR 07, CAR 08).

4.4 Additionality (27-31)

As suggested by paragraph 2 (c) of the Annex 1 of the Guidance and by the ACM0002 the most recent version 05.2 of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board is used to demonstrate additionality. The applicability of the ACM0002 is assessed in the section B.1. of this PDD. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

To prove additionality investment analysis of the project activity without JI registration, barrier and common practice analyses were applied.

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 BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 12, CAR 13, CAR 14, CAR 15, CAR 16).

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 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 areas of concerns as for project boundary were identified

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 24/03/2011, 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 or 336 months.

The PDD states the length of the crediting period in years and months, which is 28 years or 336 months, and its starting date as 01/04/2011 which is the date after the first emission reductions were 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 after 2012 in all relevant sections of the PDD.

The identified areas of concern as to the crediting period, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CAR 04, CAR 05, CAR 06, CAR 18).

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.

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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
- CO₂ emission factor for grid connected power 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 CO₂ 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), year (y), Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{PJ,y}$), specific CO₂ emission factor for power generation at Ukrainian grid connected thermal power plants in year y ($EF_{grid,produced,y}$).

The monitoring plan explicitly and clearly distinguishes:

Data and parameters that are monitored throughout the crediting period, such as project emissions (PE_y), Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{PJ,y}$), CO₂ emission factor for grid connected power generation ($EF_{grid,produced,y}$).

The monitoring plan describes the methods employed for data, such as electricity meters within the automated system for commercial metering of electricity on-site, as well as data collection frequency (continuously or monthly) and recording (electronic/paper).

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions or

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direct monitoring of emission reductions from the project, leakage, as appropriate, such as

Baseline emissions:

$$BE_y = EG_{PJ,y} \times EF_{grid,produced,y}$$

Where:

BE_y - Baseline emissions in year y (tCO₂);

$EG_{PJ,y}$ - 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 year y (MWh);

$EF_{grid,produced,y}$ - Specific CO₂ emission factor for power generation at Ukrainian grid connected thermal power plants in year y (tCO₂/MWh).

Project emissions:

According to the ACM002 for the wind power generation project activities,

$$PE_y = 0$$

Where:

PE_y - Project emissions in year y (tCO₂).

.

Emission reduction:

According to the ACM002 emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y - Emission reductions in year y (tCO₂);

BE_y - Baseline emissions in year y (tCO₂);



PE_y - Project emissions in year y (tCO₂).

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 09, CL 02, CL 04, FAR 01).

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 areas of concern as for leakage were identified.

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

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

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

(c) Emissions for the baseline scenario (within the project boundary), which are 257 447 tones CO₂ for the period 2011-2012; 8 266 967 tones CO₂ for the period 2013-2038.

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 257 447 tones CO₂ for the period 2011-2012; 8 266 967 tones CO₂ for the period 2013-2038.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 01/04/2011 to 31/12/2038, 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 CO₂;

(e) In tones of CO₂ .

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

Data sources used for calculating the estimates referred to above are clearly identified, reliable and transparent.

For calculating the estimates referred to above, key factors mentioned in Section 4.3. of the present report as well as 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 of the choice.

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

The estimates referred to above are consistent throughout the PDD.



The annual average of estimated emission reductions over the crediting period is calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period, and multiplying by twelve.

The identified areas of concern as to estimation of emission reductions or enhancements of net removals, project participants' response and BVC's conclusion are described in Appendix A, Table 2 (refer to CL 06).

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party, such as 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" State Committee Of Ukraine On Construction And Architecture, 2004.

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.

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.

No areas of concern as to environmental impacts were identified.

4.11 Stakeholder consultation (49)

No stakeholders' comments were received.

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 Novoazovskiy in Ukraine” Project. 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. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Versions 2.1 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation version 2.1 and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.



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



7 REFERENCES

Category 1 Documents:

Documents provided by LLC “Wind Park Novoazovskiy” that relate directly to the GHG components of the project.

- /1/ Project Design Document “Wind Park Novoazovskiy in Ukraine” version 1.0 dated 17/05/2011
- /2/ Financial Indicators Calculation version 1.0 excel file
- /3/ Emission Reductions Calculation version 1.0 excel file
- /4/ Project Design Document “Wind Park Novoazovskiy in Ukraine” version 2.0 dated 02/09/2011
- /5/ Financial Indicators Calculation version 2.0 excel file
- /6/ Project Design Document “Wind Park Novoazovskiy in Ukraine” version 2.1 dated 29/09/2011
- /7/ LoE No 1709/23/7 dated 30/06/2011 issued by the State environmental Investment Agency of Ukraine

Category 2 Documents:

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

- /1/ Appendix B to decision 9/CMP.1 (JI guidelines)
- /2/ Guidance on Criteria for Baseline Setting and Monitoring (version 02)
- /3/ Guidelines for users of the Joint Implementation Project Design Document Form, version 04
- /4/ Approved consolidated baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 12.1.0
- /5/ Tool to calculate the emission factor for an electricity system
- /6/ Tool for the demonstration and assessment of additionality” approved by the CDM Executive Board is version 05.2
- /7/ Statement on energy supply by the LLC “Wind Park Novoazovskiy” to the Novoazovskiy regional power grid for the period from 01/07/2011 till 21/07/2011
- /8/ Programme dated 21/02/2011 on labour safety and working technique basic instruction for technicians of LLC “Wind Park Novoazovskiy”
- /9/ Programme dated 21/02/2011 on introductory instruction for personnel of LLC “Wind Park Novoazovskiy”
- /10/ Programme dated 21/02/2011 on labour safety and electric power sector objects’ technical operation refresher course for operational and production personnel of LLC “Wind Park Novoazovskiy”
- /11/ Programme dated 21/02/2011 on fire safety basic instruction for personnel of LLC “Wind Park Novoazovskiy”



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- /12/ Duty regulations of electrician, dated 02/02/2011
- /13/ Duty regulations of power engineer, dated 02/02/2011
- /14/ Protocol #11 dated 21/02/2011 on sitting of a commission on labour safety knowledge check
- /15/ Protocol #19 dated 18/03/2011 on sitting of a commission on labour safety knowledge check
- /16/ License dated 31/03/2011, Series АГ, #500290, valid from 24/03/2011 till 23/03/2031 on electric energy generation, issued by the National Commission for Regulation of the Electric Power Sector of Ukraine (NCRE)
- /17/ Agreement #7074/04 dated 09/06/2011
- /18/ Protocol dated 25/11/2010 of urban planning conclusion civil hearings on 23 wind mills with capacity 2.5 MW construction on the lands of Sahansk Village Council
- /19/ Protocol dated 25/11/2010 of urban planning conclusion civil hearings on Wind park, 23 wind mills with capacity 2.5 MW, construction on the lands of Rozivka and Sahansk Village Council
- /20/ Certificate dated 07/06/2011, Series ДЦ #16411003378
- /21/ Certificate dated 25/05/2011, Series ДЦ #164110005556
- /22/ Certificate dated 08/06/2011 on real estate ownership
- /23/ Certificate dated 27/05/2011 on real estate ownership
- /24/ Technical description of wind mill type FL 2500
- /25/ Contract on wind park maintenance (as Annex 18 to the Agreement on supplying of wind power plants # WPN07092010) between Staveras Trading Limited and LLC "Wind Park Novoazovskiy"
- /26/ Agreement dated 07/09/2010 on supplying of wind power plants # WPN07092010
- /27/ Certificate on state metrological attestation #C8.492-2011 dated 24/02/2011, issued by the Scientific and Research Institute for Metrology of Measurement and Control Systems State Enterprise (DP NDI "Systema")
- /28/ Statement dated 24/04/2008 on acceptance of fiscal measurement system into production operation
- /29/ Lease agreement # ПС-01 dated 01/06/2011
- /30/ Agreement #07/06-2011 dated 01/07/2011 on proving the services of fiscal measurement system operator
- /31/ Preliminary Energy Yield Estimation Results to VC 10254 – Novoazovsk (Ukraine), dated 28/03/2011
- /32/ Environmental Impact Assessment of the Novoazovsk Wind Power Plant on 43 Wind Mills type Fuhrländer with 2.5 MW Capacity at Novoazovsk district of Donetsk oblast working project
- /33/ License #513125, Series AB, on business activity connected with architectural objects construction, issued by the Ministry of Regional Development, Building and Housing of Ukraine (valid from 02/02/2010 till 02/02/2015)
- /34/ Wind Farm Energy Yield and Turbulence Assessment prepared by Deutsche WindGuard Consulting GmbH

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- /35/ Financial Statement No 376 dated 05/09/2011 issued by LLC “Wind Park Novoazovskiy”
- /36/ Information of the Ministry of Fuel and Energy Resources of Ukraine
- /37/ European Bank for Reconstruction and Development. Development of the electricity carbon emission factors for Ukraine
- /38/ Comprehensive Programme to build Wind Parks to 2010
- /39/ World Wind Energy Association. World Wind Energy Report 2010
- /40/ Web-site DT.UA. Article Myths and Realities of the Ukrainian Wind Energy
- /41/ Law of Ukraine On Changes To Some Laws of Ukraine About The Introduction of “Green” Tariff
- /42/ Law of Ukraine On Changes To The Law of Ukraine On Electric Energy About The Incentives To Use Alternative Energy Sources
- /43/ The Energy Strategy of Ukraine for the period until 2030
- /44/ Data by the State Agency of Ukraine for Investments and Innovations
- /45/ Statistical Release. Interest Rates. March 2011
- /46/ Germany, Harmonised long-term interest rates for convergence assessment purposes
- /47/ Data from Aswath Damodaran, Ph.D., Stern School of Business NYU
- /48/ Report of the Ministry of Coal Industry of Ukraine on the fuels prices
- /49/ Operational Guidelines for Project Design Documents of Joint Implementation Projects. Ministry of Economic Affairs of the Netherlands, May 200426
- /50/ Standardized emission factors for the Ukrainian electricity grid, Version 5, 2007, Global Carbon B.V.
- /51/ Development of the electricity carbon emission factors for Ukraine29, 2010, Lahmeyer International
- /52/ Specific carbon emission factors for the production of electricity, National Environmental Investment Agency of Ukraine (NEIA), 2011
- /53/ Law of Ukraine “On Electrical Power Industry”
- /54/ Principles of Corporate Finance 7th edition, Richard A. Brealey, Stewart C. Myers, McGraw-Hill Higher Education, 2003 – p. 105
- /55/ Portfolio of Wind Power Plants in the Autonomous Republic of Crimea (WPP-300)
- /56/ 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” State Committee Of Ukraine On Construction And Architecture, 2004
- /57/ Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, Second Edition, A. Damodaran, 992 pages Publisher: Wiley; 2nd edition (January 18, 2002), page 218.



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- /58/ http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf
Appendix Default values for the expected return on equity Para 2
- /59/ Country risk premium for Ukraine
<http://www.stern.nyu.edu/~adamodar/pc/archives/ctryprem09.xls>
Value as of January 2010
- /60/ Expected return risk (introduction of the new technology for Ukraine)
<http://www.libinfo.org/nsi/index.php?file=z0711009&down=z0711009.rar> Page 56 (Low to Average risk, lower value from the range of 6-7%)
- /61/ Inflation in Euro Area (Average 1997 - 2010)

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/ Nikita Prygornitsky – Chief Economist, LLC “Wind Park Novoazovskiy”
- /2/ Radzhy Adamov – Chief Enbergy Manager, LLC “Wind Park Novoazovskiy”
- /3/ Vladimit Adamov – Lawer, LLC “Wind Park Novoazovskiy”
- /4/ Denis Prusakov - Senior JI Consultant, Global Carbon BV

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APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

Table 1

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 Novoazovskiy in Ukraine"		OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scope is: (1) Energy industries (renewable/non-renewable sources)		OK
-	Is the current version number of the document presented?	PDD Version 2.1.		OK
-	Is the date when the document was completed presented?	PDD dated 29 September 2011.		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 107.5 MW in Donetsk Region of Ukraine by the company LLC "Wind Park Novoazovskiy" to generate environmentally sound electricity with "zero" GHG emissions.		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.	CAR 03	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 03. 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)		
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Party(ies) and project participants involved in the project are listed as follows: Party A: Ukraine and its legal entity LLC "Wind Park Novoazovskiy" ; - Party B: the Netherlands and its legal entity Global Carbon B.V.		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
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD.		OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Ukraine is indicated as Host Party.		OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine		OK
-	Region/State/Province etc.	Donetsk Region		OK
-	City/Town/Community etc.	Village of Bezimenne of the Donetsk Region of Ukraine		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: 47°8'22.72"N 37°54'22.23"E		OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	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?	<p>PDD Section A.4.2 provides some relevant technical data of main equipment installed and actions to be implemented by the project.</p> <p>CAR 17. Please, transfer the implementation schedule from Section A.2. to Section A.4.2.</p> <p>CL 01. Please, clarify if the turbines FL 2500 are of the same type. If yes, please, remove the technical characteristics that do not relate to the project from the Table on p.6 of the PDD</p>	CL01 CAR17	OK OK
<p>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</p>				
-	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
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided.		OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO ₂ e?	Estimated annual reduction for the chosen credit period is provided in tCO ₂ .		OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format. Refer to Tables 1 and 2.		OK


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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 9 months or 21 months. Length of the part of crediting period after the first commitment period of the Kyoto Protocol: 26 years and 3 months or 315 months.		OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO ₂ equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO ₂ equivalent are provided in accordance with the calculated values in the spreadsheet provided to the verifier.		OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	CAR 01. The project has no written approvals by the Parties involved. The project approval by the Host Party will be provided after the determination statement is issued by the AIE.	CAR01	Pending
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
19	Has the DFP of the host Party issued a written project approval?	Refer to CAR 01		OK
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.		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	CAR 02. The project participants LLC "Wind Park Novoazovskiy" and Global Carbon B.V. are not authorized by the Parties involved in the project.	CAR02	Pending



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	PDD, through: <ul style="list-style-type: none"> - A written project approval by a Party involved, explicitly indicating the name of the legal entity? or - Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity? 	The project participants will be authorized with the issue of the written project approvals.		
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? <ul style="list-style-type: none"> - 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 3 of the PDD)		OK
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:		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<ul style="list-style-type: none"> - 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 		
23	<p>Does the PDD provide justification that the baseline is established:</p> <p>(a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?</p> <p>(b) Taking into account relevant national and/or sectoral policies and circumstance? –Are key factors that affect a baseline taken into account?</p> <p>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?</p> <p>(d) Taking into account of uncertainties and using conservative assumptions?</p> <p>(e) In such a way that ERUs cannot be</p>	<p>Baseline is established:</p> <p>(a) By listing and describing three realistic and credible alternative scenarios to the project activity.</p> <p>(b) Taking into account relevant national and/or sectoral policies and circumstance regarding alternative energy production (refer to Section B.1., footnotes 13, 16, 17,19, 20, 24, 25, 26) as well as key appropriate factors that affect a baseline, such as economic situation/growth and 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.</p> <p>(c) The baseline is established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key</p>	CL05	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>earned for decreases in activity levels outside the project or due to force majeure?</p> <p>(f) By drawing on the list of standard variables contained in appendix B to “Guidance on criteria for baseline setting and monitoring”, as appropriate?</p>	<p>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.</p> <p>(d) Taking account of uncertainties and using conservative assumptions. The project participants followed all of the elements of the approved CDM baseline and monitoring methodology ACM0002 to establish the baseline. All data necessary to establish the baseline where taken from open and publicly available sources. The emission factor chosen to establish the baseline is calculated based on conservative assumptions:</p> <ul style="list-style-type: none"> - 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 (OM) 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. <p>(e) in such a way that ERUs 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.</p>		



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CL 05. Please, explain in what way the correction factor for the uncertainty of the waste heaps burning process mentioned in Annex 2 relates to the key elements of the baseline, as well as to the project on the whole.		
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? CAR 07. At the time of setting the baseline (19.05.2010) the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" was valid (the period of validity is from 26 Feb 10 to 16 Sep 10). Please, make due corrections	CAR07	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	Specific carbon dioxide non direct emissions factors 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.	CAR08	OK
Approved CDM methodology approach only_ Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
Jl 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	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



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals;</p> <p>(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;</p> <p>(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".</p>			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	<p>The applicability of the ACM0002 is assessed and justified in Section B.1.</p> <p>CAR 12. Please note that the basis (the return on equity in renewable energy in USA) is not the risk-free rate. It already includes the risk associated with new and unproven technology in renewable energy sector as it is calculated for the same type of activities. Therefore second adjustment for technical risk is obviously excessive not to mention the fact that on-shore installation of wind turbines of 2.5MW is proven, low-risk and widely employed technology as the</p>	CAR12 CAR13	OK OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>Developer himself mentions in the PDD.</p> <p>CAR 13. The counter-party risk can not be justified from the information available from the PDD as we do not know the number of investors, their contribution and their relationships thereby we are not able to estimate the specific risk level. For this reason the premium for counter-party risk can not be taken into consideration basing on conservative approach.</p>		
29 (b)	Are additionality proofs provided?	<p>CAR 16. Please clarify how the liquidation value of the project facilities has been calculated as the formulas in financial model are missing.</p>	CAR16	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	<p>To prove additionality investment analysis of the project activity without JI registration, barrier and common practice analysis were applied.</p> <p>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.</p> <p>Barrier analysis strengthens the additionality argument by listing technological barriers preventing the project</p>	CAR14 CAR15	OK OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>implementation.</p> <p>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.</p> <p>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.</p> <p>CAR 14. From set forth above the proper nominal discount rate shall be calculated as the sum of the WACC in wind/renewable energy projects in USA + the country risk.</p> <p>CAR 15. Taking into account the fact that developer states that the project is financed solely through the equity, the return on equity may be used instead of WACC but the developer shall provide the confirmation that no debt financing is attracted for the present project or example providing the latest balance.</p>		
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
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	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		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	to define the project boundary. 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.		
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
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	Delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD by using Table 8.		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 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
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	Starting date of the project is 24/03/2011. This is the date when the license for electricity generation has		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	implementation or construction or real action of the project will begin or began?	been received.		
34 (a)	Is the starting date after the beginning of 2000?	Refer to 34 (a).		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
34 (c)	Does the PDD state the length of the crediting period in years and months?	<p>Length of the crediting period stated is 28 years or 336 months.</p> <p>Length of the crediting period within the first commitment period of the Kyoto Protocol is 1 year and 9 months or 21 months.</p> <p>Length of the crediting period after the first commitment period of the Kyoto Protocol: 26 years and 3 months or 315 months.</p> <p>CAR 04. The period of time given in Table 1 refers to the first commitment period under the Kyoto Protocol. The crediting period determined for the current project covers years from 2011 till 2038. Please check this and bring in line information provided in Tables 1 and 2 with one specified in Section C. Rename the respective tables accordingly throughout the PDD.</p> <p>CAR 05. It is stated in Section C.3 that the length of the crediting period (correct: the Kyoto Protocol first commitment period) makes 1 year and 9 months. Please, make respective corrections in Table 1.</p> <p>CAR 06. The number of years specified in Table 2</p>	CAR04 CAR05 CAR06	OK OK OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		doesn't coincide with information provided further in the same table. Please, make it consistent.		
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: 01/04/2011 which is the date after the first emission reductions were generated by the project		OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The crediting period defined as from 01/04/2011 till 2038 inclusive exceeds the project operational lifetime that was calculated for the period of 25 years only. CAR 18. How could it be explained?	CAR 18	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The 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
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
JI specific approach only				



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (a)	Does the monitoring plan describe: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> • Quantity of net electricity generation that is produced and fed into the grid • CO₂ emission factor for grid connected power 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. <p>CAR 09. 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.</p>	CAR09	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net	Specific carbon dioxide non direct emissions factors for consumption of electricity generated by power stations of united energy system of Ukraine approved by the DFP of Ukraine.		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	removals to be monitored?			
36 (b)	If default values are used: <ul style="list-style-type: none"> – 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
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
36 (b) (ii)	For other values, <ul style="list-style-type: none"> – 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
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	N/A		OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.		OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc.	The monitoring plan notes a parameter that is used to calculate baseline emissions based on monitored data		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	that are used to calculate baseline emissions or net removals but are obtained through monitoring?	of quantity of net electricity generation.		
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
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
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
36 (e)	Does the monitoring plan describe the methods employed for data monitoring	The methods used (electricity meters within the automated system for commercial metering of	CL02	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(including its frequency) and recording?	electricity on-site) and data collection frequency (continuously or monthly) and recording (electronic/paper) are clearly defined in the monitoring plan		
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	These are Formulae: (D.1-1) – (D.1-3) for project emissions, (D.1-4) – (D.1-6) for baseline emissions, (D. 1-7) – (D.1-8) for leakage, (D.1-9) for emission reduction.		OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Yes		OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.		OK
36 (f) (iii)	Are all equations numbered?	All equations are numbered		OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes		OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/A		OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/A		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
36 (f) (vii)	Are any parts of the algorithms or formulae	All formulae are clearly explained		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	that are not self-evident explained?			
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
36 (f) (vii)	Are references provided as necessary?	N/A		OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions are explained in a transparent manner if needed.		OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A		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
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?	N/A		OK
36 (h)	Does the monitoring plan document statistical techniques, if used for	N/A		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	monitoring, and that they are used in a conservative manner?			
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. These are routine enterprise procedures.		OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure that the project participants will implement in order to monitor emission reduction generated by the project is described in sufficient detail in PDD Section D.3. CL 04. Please, explain what the abbreviation SCADA in Figure 4 “Operational and Management Structure stands for or provide a reference for its full name as a footnote FAR 01. Operational and Management structure with assigned roles and responsibilities must be officially documented and communicated to the personnel involved in the monitoring procedure.	CL04 FAR01	OK FAR01
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
36 (l)	Does the monitoring plan provide, in	Tables D.1.1.1 and D.1.1.3 provide compilation of all		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	data needed to monitor project and baseline emissions.		
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 be kept at least for 2 years after the end of the last crediting period.		OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	The selected elements or combination, together with elements supplementary developed by the project participants are in line with 36 above.		OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable				
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	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		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		use (e.g. extraction, processing, transport). These emissions sources are neglected.		
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A		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 I - Monitoring of the emissions in the project scenario and the baseline scenario. CL 06. 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	CL06	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	(a) Project emissions according to the ACM0002 equal zero; (b) N/A; (c) Emissions for the baseline scenario (Section E.4); (d) N/A		OK
44	If the approach (b) in 42 is chosen, does	N/A		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>the PDD provide ex ante estimates of:</p> <p>(a) Emission reductions or enhancements of net removals (within the project boundary)?</p> <p>(b) Leakage, as applicable?</p> <p>(c) Emission reductions or enhancements of net removals adjusted by leakage?</p>			
45	<p>For both approaches in 42</p> <p>(a) Are the estimates in 43 or 44 given:</p> <p>(i) On a periodic basis?</p> <p>(ii) At least from the beginning until the end of the crediting period?</p> <p>(iii) On a source-by-source/sink-by-sink basis?</p> <p>(iv) For each GHG?</p> <p>(v) In tones of CO₂ equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?</p> <p>(b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated</p>	<p>(a) Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tones of CO₂, on a source-by-source basis, for CO₂ as per the ACM0002</p> <p>(b) The formulae used in PDD are consistent.</p> <p>(c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate.</p> <p>(d) Data sources used for calculating the estimates are clearly identified, reliable and transparent.</p> <p>(e) Default value of grid emission factor is taken from identified sources.</p> <p>(f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner.</p> <p>(g) Estimates in 43 are consistent throughout the PDD.</p> <p>(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.</p>		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>with the project taken into account, as appropriate?</p> <p>(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?</p> <p>(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?</p> <p>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?</p> <p>(g) Are the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(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?</p>			
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 06.		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Approved CDM methodology approach only Paragraphs 47(a) – 47(b) Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	<p>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.</p> <p>The project has no transboundary impacts.</p> <p>CAR 10. Please provide EIA for the project.</p> <p>CAR 11. Please provide the correct name for the Ministry of Environment on p.36 of the PDD</p>	CAR10 CAR11	OK OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to 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 will be described in EIA that at the time of determination was undergoing final development process and will be subject to approval by the relevant Ukrainian authorities mandated by the Ministry of Environmental Protection of Ukraine.		OK
Stakeholder consultation				
49	If stakeholder consultation was undertaken	Meetings with the local stakeholders during the project		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	development period were organized by the PPs. (For the detailed accords of these meetings, please, refer to Category 2 Documents (#18, #19) of Section 7 References of the present Report). No negative comments were received during the public hearings.		
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				



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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
<p>CAR 01. The project has no written approvals by the Parties involved.</p> <p>The project approval by the Host Party will be provided after the determination statement is issued by the AIE.</p>	19	<p>The project approval by the Host Party will be provided after the determination statement is issued by the AIE.</p>	Pending
<p>CAR 02. The project participants LLC “Wind Park Novoazovskiy” and Global Carbon B.V. are not authorized by the Parties involved in the project.</p>	21	<p>The project participants will be authorized with the issue of the written project approvals.</p> <p>The project approval by the Host Party will be provided after the determination statement is issued by the AIE.</p>	Pending
<p>CAR 03. 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)</p>	–	<p>Corrected. Appropriate information has been added to the Section A.2. of the PDD ver. 2.0 from 02/09/2011 detailing the brief project history and its JI component</p>	The required data has been provided. CAR 03 is closed
<p>CL 01. Please, clarify if the turbines FL 2500 are of the same type. If yes, please, remove the technical characteristics that do not relate to the project from the Table on p.6 of the PDD</p>	–	<p>The wind turbines utilised in this project are the FL-2500-100 type with 100m hub height and 100m rotor diameter. Necessary updates have been made in Table on the page 6 of the PDD ver. 2.0 from 02/09/2011.</p>	CL01 is closed based on the necessary updates made to the PDD



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<p>CAR 04. The period of time given in Table 1 refers to the first commitment period under the Kyoto Protocol. The crediting period determined for the current project covers years from 2011 till 2038. Please check this and bring in line information provided in Tables 1 and 2 with one specified in Section C. Rename the respective tables accordingly throughout the PDD.</p>	34(c)	Corrected. Tables 1 and 2 present estimates of emission reductions for the crediting period being split between the first commitment period under the Kyoto protocol and period after the end of the first commitment period. Respective tables have been renamed throughout the PDD ver. 2.0 from 02/09/2011.	CAR 04 is closed based on the necessary corrections made to the PDD
<p>CAR 05. It is stated in Section C.3. that the length of the crediting period (correct: the Kyoto Protocol first commitment period) makes 1 year and 9 months. Please, make respective corrections in Table 1.</p>	34(c)	Corrected. Section C.3. and the Table 1 refer to the length of the part of crediting period within the first commitment period of the Kyoto Protocol - 1 year and 9 months or 21 months – in the PDD ver. 2.0 from 02/09/2011.	CAR 05 is closed based on the necessary corrections made to the PDD
<p>CAR 06. The number of years specified in Table 2 doesn't coincide with information provided further in the same table. Please, make it consistent.</p>	34(c)	Corrected. Table 2 reports correct number of years in the PDD ver. 2.0 from 02/09/2011.	CAR 06 is closed based on the necessary corrections made to the PDD
<p>CAR 07. At the time of setting the baseline (19.05.2010) the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" was valid (the period of validity is from 26 Feb 10 to 16 Sep 10). Please, make due corrections</p>	24	Corrected. The reported version number of the ACM0002 (12.1.0) from which the selected elements are used is the latest at the time of baseline setting 02/09/2011 in the PDD ver. 2.0 from 02/09/2011.	CAR 07 is closed based on the due corrections made to the PDD
<p>CAR 08. Please provide reference for the "Tool to calculate the emission factor for an electricity system" mentioned on p.13 of the PDD.</p>	25	Corrected. References are provided in the PDD ver. 2.0 from 02/09/2011	



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CL 02. Please specify a measuring device for EGpj,y parameter in tables on p.18 and p. 29 of the PDD	36(e)	Corrected. The measuring devices for this parameter are the electricity meters of the automated system for the commercial measurement of electricity. This information has been added to the PDD ver. 2.0 from 02/09/2011.	CL 02 is closed based on the necessary information provided to the determination team
CL 03. Please, provide documentary evidence for the expected operational lifetime of the project		The expected operational lifetime of the project equipment is taken as a default value based on the document "Tool to determine the remaining lifetime of equipment" Version 01 (http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-10-v1.pdf) Page 4 and is taken as 25 years for an onshore wind turbine.	CL 03 is closed based on the required explanation provided to the determination team
CAR 09. 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)	Corrected. The actual monitoring of the electricity produced by the wind park is done continuously and reports can be generated by the automated system for commercial metering of electricity for any given interval of time. The official reports are prepared monthly and for the purpose of monitoring the emission reductions annual aggregation will y performed. Information in the table D.1.1.3 has been updated in the PDD ver. 2.0 dated 02/09/2011 to reflect this fact more clearly. The units for parameters, values etc. are given per year as it is required in the PDD to estimate annual GHG emissions and reductions.	CAR 09 is closed based on the necessary explanation provided to the determination team
CAR 10. Please provide EIA for the project.	48(a)	The EIA is provided in the supporting document SD1_WPN_EIA.	CAR 10 is closed based on the requested documents provided to the determination team



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CL 04. Please, explain what the abbreviation SCADA in Figure 4 "Operational and Management Structure stands for or provide a reference for its full name as a footnote	36(j)	The explanation has been provided in Figure 4 of the PDD ver. 2.0 from 02/09/2011.	The explanation has been provided. CL 04 is closed
FAR 01. 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)	The Operational and Management structure with assigned roles and responsibilities will be officially documented and communicated to the personnel involved in the monitoring procedure before the initial verification of emission reductions.	FAR 01 remains open until the subsequent verification.
CAR 11. Please provide the correct name for the Ministry of Environment on p.36 of the PDD	48(a)	Corrected. Correct name of the Ministry is presented in the PDD ver. 2.0 from 02/09/2011	CAR 11 is closed based on the corrections made to the PDD
CL 05. Please, explain in what way the correction factor for the uncertainty of the waste heaps burning process mentioned in Annex 2 relates to the key elements of the baseline, as well as to the project on the whole.	23	Corrected. Updated Annex 2 is presented in the PDD ver. 2.0 from 02/09/2011	CL 05 is closed based on the corrections made to the PDD



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<p>CL 06. 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</p>	<p>42</p>	<p>The data used in the estimation of emission reductions originate from the forecast of annual energy yield of the wind park. Such forecast is prepared on the basis of equipment specification, site location data and wind characteristics. In order to compile these data detailed land surveys are performed and wind characteristics are measured (speed, direction etc.). These data are fed into the specialized modelling software that is able to prepare accurate forecasts of the energy yield for the wind park taking into account individual turbine location, mutual shading effect, wind characteristics etc. The forecast for Wind Park Novoazovskiy is being prepared by the Deutsche WindGuard Consulting GmbH. As the calculations of energy yield are sensitive to the input data, parameters of the equipment etc. slight differences between the resulting figures are to be expected. Extracts from the reports prepared by Deutsche WindGuard Consulting GmbH are attached as supporting document SD2_WindGuard_Study.</p>	<p>CL06 is closed based on the explanations provided.</p>
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<p>CAR 12. Please note that the basis (the return on equity in renewable energy in USA) is not the risk-free rate. It already includes the risk associated with new and unproven technology in renewable energy sector as it is calculated for the same type of activities. Therefore second adjustment for technical risk is obviously excessive not to mention the fact that on-shore installation of wind turbines of 2.5 MW is proven, low-risk and widely employed technology as the Developer himself mentions in the PDD.</p>	<p>29(a)</p>	<p>Corrected. This has been corrected in the updated model. The basis for expected ROE calculation is now the risk-free rate (US Government Bonds) adjusted with equity risk premium (US historical average), host country risk premium and risk adjustment factor for introduction of the new technology in Ukraine.</p> <p>Even though it may be argued that on-shore installation of wind turbines of 2.5 MW is proven, low-risk and widely employed technology for certain markets and locations it has to be mentioned that it is not the case for Ukraine. The reasons for it are:</p> <ul style="list-style-type: none"> - Risks for the grid stability. Ukrainian power grid is not suited for receiving power from a highly variable large-scale producer (such as a big wind park). This may potentially lead to grid failure and discontinuation of the project. - O&M unavailability. This project is the first attempt at introduction of the large-scale wind power plant in Ukraine. Required service and maintenance capacity is not readily available in the country. This results in long lead times for spare parts delivery, longer overhaul time periods and potential risk of increased unavailability of the capacity. - Lack of data and operational history. In Ukraine long-term data on wind conditions are mostly unavailable. Without these data it is not possible to establish reliable long-term production forecast for a wind park. Any forecast will be based on short-term (up to 1 year) wind data thus reducing the reliability of calculations. 	<p>CAR 12 is closed based on the corrections made to the PDD</p>
		<p>On the whole, it also should be taken into account that while on-shore wind turbines of 2.5 MW is proven, low-risk and widely employed technology for certain markets and locations it has to be mentioned that it is not the case for Ukraine. The reasons for it are:</p>	<p>53</p>



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<p>CAR 13. The counter-party risk can not be justified from the information available from the PDD as we do not know the number of investors, their contribution and their relationships thereby we are not able to estimate the specific risk level. For this reason the premium for counter-party risk can not be taken into consideration basing on conservative approach.</p>	29(a)	<p>Corrected. This risk adjustment factor has been removed from the consideration.</p> <p>Please, refer to the Excel sheet 20110902_CF_WPN_ver2.0 and PDD ver. 2.0 from 02/09/2011.</p>	CAR 13 is closed based on the corrections made to the PDD
<p>CAR 14. From set forth above the proper nominal discount rate shall be calculated as the sum of the WACC in wind/renewable energy projects in USA + the country risk.</p>	29(c)	<p>Corrected. The proper discount rate has been recalculated.</p> <p>Please, refer to the Excel sheet 20110902_CF_WPN_ver2.0 and PDD ver. 2.0 from 02/09/2011.</p>	CAR 14 is closed based on the corrections made to the PDD
<p>CAR 15. Taking into account the fact that developer states that the project is financed solely through the equity, the return on equity may be used instead of WACC but the developer shall provide the confirmation that no debt financing is attracted for the present project or example providing the latest balance.</p>	29(c)	<p>The project is financed solely through equity which is confirmed by the supporting document SD3_FinancingStructure.</p>	CAR 15 is closed based on the explanations provided.
<p>CAR 16. Please clarify how the liquidation value of the project facilities has been calculated as the formulas in financial model are missing.</p>	29(b)	<p>Corrected. The remaining value of the project facilities at the end of the assessment period have been calculated as the difference between the initial value and accumulated depreciation calculated by the cumulative method.</p> <p>Please, refer to the Excel sheet 20110902_CF_WPN_ver2.0 and PDD ver. 2.0 from 02/09/2011.</p>	CAR 16 is closed based on the clarification provided.



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<p>CAR 17. Please, transfer the implementation schedule from Section A.2. to Section A.4.2.</p>	<p>–</p>	<p>Corrected. Appropriate information has been added to the Section A.4.2. of the PDD ver. 2.1 dated 29/09/2011.</p>	
<p>The crediting period defined as from 01/04/2011 till 2038 inclusive exceeds the project operational lifetime that was calculated for the period of 25 years only. CAR 18. How could it be explained?</p>	<p>34(d)</p>	<p>The period of 25 years has been taken as a value for the operational lifetime of the individual wind turbine. Taking into account construction schedule (in stages) and decommissioning period (also in stages) the operational lifetime of the entire project will be 28 years or 336 months covering the period indicated in the Section C of the PDD ver. 2.1 dated 29/09/2011. This logic is also evident from the emission reduction estimation file 20110517_ER_WPN_ver1.0</p>	<p>CAR 18 is closed based on the explanations provided.</p>