



# DETERMINATION REPORT GEMBA, UAB

## DETERMINATION OF THE SEIRIJAI WIND POWER PARK

REPORT NO. LITHUANIA-DET/0016/2011

REVISION No. 02

BUREAU VERITAS CERTIFICATION

## DETERMINATION REPORT

Date of first issue: 07/04/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Gemba, UAB	Client ref.: Mr. Aleksas Jakštas, CEO

**Summary:**

Bureau Veritas Certification has made the determination of the "Seirijai wind power park" of Gemba, UAB located near Seirijai village, Lazdijai district, Lithuania on the basis of UNFCCC criteria for the JI, as well as the 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) a desk review of the project design, baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applied and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: LITHUANIA-DET/0016/2010	Subject Group: JI
Project title: Seirijai wind power park	
Work carried out by: Team Leader: Tomas Paulaitis Financial specialist: Gediminas Vaškėla Technical specialist: Kęstutis Navickas	
Work verified by: Internal technical reviewer: Ashok Mammen	
Work approved by: Local product manager: Witold Dżugan	
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**Indexing terms**

Climate Change, Kyoto Protocol, joint implementation, emissions reduction, determination

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**Abbreviations change / add to the list as necessary**

AVIR	Average Value of the Interest Rate
BASREC	Baltic sea region energy co-operation
CL	Clarification Request
CO <sub>2</sub>	Carbon Dioxide
DFP	Designated Focus Point
EU ETS	European Union Emissions Trading Scheme
GHG	Green House Gas(es)
IETA	International Emissions Trading Association
INPP	Ignalina nuclear power plant
JI	Joint Implementation
NGO	Non Government Organization
MoV	Means of Verification
PCF	Prototype Carbon Fund
PDD	Project Design Document
UAB	Joint Stock Company

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## 1 INTRODUCTION

Gemba, UAB has commissioned Bureau Veritas Certification to determine its JI project “Seirijai wind power park” (hereafter called “the project”) at Seirijai village, Lazdijai district, Lithuania.

This report summarizes the findings of the determination of the project, performed on the basis of UNFCCC criteria, as well as the 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 the host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

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

### 1.2 Scope

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

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

### 1.3 GHG Project Description

The project would displace carbon intensive electricity produced from fossil fuel sources in the Lietuvos Elektrine. It is foreseen to install 3 wind power plants with the total capacity of 6,0 MW (2 MW x 3). The wind turbines power park will be manufactured, installed, adjusted and set into action by Enercon GmbH staff. After the wind park's commissioning it is planned to sign an additional agreement on the turbines' maintenance between the companies.

The Seirijai wind power park, in a conservative approach, will generate about 13,62 GWh of electric power per year. Such wind park's generation will lead 8526 tCO<sub>2</sub>/year emission reductions on Lietuvos Elektrine side.

#### **1.4 Determination team**

The determination team consists of the following personnel:

Tomas Paulaitis,  
Bureau Veritas Certification Team Leader, Climate Change Verifier

Gediminas Vaškėla  
Bureau Veritas Certification Team member, financial specialist

Kęstutis Navickas  
Bureau Veritas Certification Team member, technical specialist

Internal technical review was carried out by:  
Ashok Mammen  
Bureau Veritas Certification Internal technical reviewer, Lead verifier

## **2 METHODOLOGY**

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

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

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

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

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



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<b>Determination Protocol Table 1: Mandatory Requirements</b>			
<b>Requirement</b>	<b>Reference</b>	<b>Conclusion</b>	<b>Cross reference</b>
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided ( <b>OK</b> ), or a <b>Corrective Action Request (CAR)</b> or a <b>Clarification Request (CL)</b> of risk or non-compliance with stated requirements are issued. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is determined. This is to ensure a transparent determination process.

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

<b>Determination Protocol Table 3: Baseline and Monitoring Methodologies</b>				
<b>Checklist Question</b>	<b>Reference</b>	<b>Means of verification (MoV)</b>	<b>Comment</b>	<b>Draft and/or Final Conclusion</b>
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is then further subdivided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided ( <b>OK</b> ), or a <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question is issued. (See below). <b>Clarification Request (CL)</b> is used when the determination team has identified a need for further clarification.



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

<b>Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests</b>			
<b>Report clarifications and corrective action requests</b>	<b>Ref. to checklist question in tables 2/3</b>	<b>Summary of project owner response</b>	<b>Determination conclusion</b>
If the conclusions from the Determination are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4 under "Final Conclusion".

**Figure 1 Determination protocol tables**

**2.1 Review of Documents**

The PDD (version 01) submitted by Gemba, UAB to Bureau Veritas on December 2010 and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (JI-PDD), Approved methodology, Kyoto Protocol, Clarifications on Determination Requirements to be checked by an accredited independent entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests Gemba, UAB revised the PDD (version 03) and financial model and resubmitted it on 23/08/2011.

The determination findings presented in this report relate to the project as described in the PDD version 03.



## 2.2 Follow-up Interviews

On 10/01/2011 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Gemba, UAB were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
Gemba, UAB	➤ PDD, monitoring plan, project approval by local authorities, stakeholder comments, investment analysis, baseline, additionality, environmental impact

## 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 need to be clarified for Bureau Veritas Certification positive conclusion on the project design.

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

## 3 DETERMINATION FINDINGS

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

- 1) The findings from the desk review of the original project design documents and the findings from interviews during the follow-up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.
- 2) Where Bureau Veritas Certification identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 7 Corrective Action Request and 7 Clarification Requests.
- 3) The conclusions for determination subject are presented.

### 3.1 Project Design

The project reflects a standard wind park with modern state-of-the-art turbines. It is not likely that the project technology might be substituted by significantly better technologies within the project period. The detailed layout of wind power plants and calculations on wind speed parameters were done by Enercon. The project will generate about 13,62 GWh of electric power per year.

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

The project design is sound and the geographical (as described in the PDD section B.3) and temporal (20 years) boundaries of the project are clearly defined.

The detailed plan with the permission to build wind power plants and connection to the grid were issued by Lazdijai municipality on 11/05/2004. At the moment of the on-site visit final construction works has been started. Start-up work and commissioning are planned in February 2011.

The project idea (project idea note) was approved by Lithuanian DFP (Ministry of Environment of the Republic of Lithuania) and the Letter of Endorsement (LoE) was issued on 31/03/2009. The letter of approval was not issued on the time of draft determination report issuance (07/04/2011), therefore CAR 1 is valid. According to Lithuanian JI guidelines the letter of Approval (LoA) might be issued only after the draft determination report submission to the Ministry of Environment.

The Letter of Approval was issued by Ministry of Environment of the Republic of Lithuania on 25/11/2011 and was found acceptable to close CAR1.

The Investor party has not been selected yet. The approval from the investor country will be compulsory for the first monitoring report verification.

The project is expected to be in line with host country specific JI requirements when LoA is issued.

CL 1-2 were issued in relation with Project Design. These CL's where resolved efficiently in the revised PDD version 03.

### 3.2 Baseline and Additionality

The Project uses the project specific baseline methodology. The country's baseline scenario and baseline emissions factor have been described by the Ministry of Environment of the Republic of Lithuania during the preparation of the National Allocation Plan (NAP) for the first commitment period (2008-2012). The NAP indicates that Lithuanian baseline emissions factor is 0,626 tCO<sub>2</sub>/MWh.

The Baseline methodology that is indicated in the NAP is based on the historic data of Lietuvos Elektrine and this method suits best for the Lithuanian power market. CDM ACM0002 methodology is not used for the baseline calculation due to the following reasons:

- Lietuvos Elektrine, the power plant with the second largest installed capacity in Lithuania (after Ignalina nuclear power plant – INNP) is operating on the power grid as a marginal plant. It covers all power demand which is remaining after all other power producers have supplied their quota power to the grid. Hence, by simply including all these power plants operating on the grid (excl. INPP) would bias the Operating Margin emissions factor.
- There is an overcapacity of installed power in Lithuania, so only very few new power plants are built. Because of that, it is impossible to calculate properly the Build Margin emissions factor.

The additionality of the project is proven using version 05.2 of the CDM Tool for the Demonstration and Assessment of Additionality as approved by the CDM Executive Board.

The possible alternative baseline scenarios are the following:

- (a) Proposed project activity without JI;
- (b) The electric power in the Lithuanian network will be produced by new modern cogeneration power plants.

The baseline options considered do not include those options that:

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

The additionality of the project is proven using version 05.2 of the “CDM Tool for the Demonstration and Assessment of Additionality” as approved by the CDM Executive Board. Steps 1 (sub-steps 1a and 1b), step 2 (applying benchmark analysis (option III)) and step 4 is used.

The investment decision date is determined to be date of the board decision date (October 2008).

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The benchmark analysis is used to demonstrate additionality, because Investment comparison analysis (option II) is not applicable for the project as the alternative "A" is the project itself but without an JI incentive and on the other hand the alternative "B" is based on investment that is out of control of the Project developer, i.e. project could be developed by a different entity (as described in paragraph 15 in the Annex to the Tool for the demonstration and assessment of additionality v.05.2).

In order to apply a benchmark comparable to the project IRR the project proponent selected to use the average value of the interest rate (AVIR) on loans for non-financial corporations (7,77 %) published by the central bank of Lithuania valid on date of investment decision (period between 01/05/2008 and 31/10/2008). All assumptions are clearly justified (see Annex A, referenced documents are provided for verification (see section 6 "References"). The calculated project IRR (6,07 %) is lower than benchmark value. The sensitivity analysis shows that financial attractiveness is robust to reasonable variations (see Annex 1 for more details).

The project participants have not used the barrier analysis.

Step 4 common analysis proves that there are no similar scale wind energy parks that are under operation without JI scheme in the Lithuania. All larger wind energy parks (more than 6 MW capacity) are covered under JI scheme already.

CAR 2-7 and CL 3-7 were issued in relation with Project additionality. These CL's were resolved efficiently in the revised PDD version 03.

### 3.3 Monitoring Plan

The Project uses the project specific monitoring methodology. Monitoring activities are described in the PDD, section D and Annex 3.

The project specific monitoring methodology has been chosen based on the fact that the only variable to be monitored is net electricity supplied to the grid. This monitoring is standardized and controlled according to the requirements of the national legislation, therefore, the verification team agree that a complex monitoring plan is not necessary and accept it.

There is no CAR's or CL's issued in relation with the Monitoring plan.

### 3.4 Calculation of GHG Emissions

The park's energy consumption from the grid value will be covered by the equal value of generated power, i.e. the power supplied to the national grid will be reduced by this value. Therefore, the project emissions are considered equal to zero.

There are no direct or indirect emissions outside the project boundary attributable to the project activity.

Baseline emissions (BE) are calculated as follows:

$$ER = E_{SP} \times EF_{GRID}$$

Where,

ER - emission reductions, tCO<sub>2</sub>

$E_{SP}$  – net power dispatched to the grid from Seirijai wind power park (difference between supplied into grid power and consumed from the grid power), kWh

$EF_{GRID}$  – emission factor for power production in Lithuania, 0,626 tCO<sub>2</sub>/MWh.

$$E_{SP} = E_{SUP} - E_{CON}$$

Where:

$E_{SUP}$  = Electricity supplied to the grid by the project (MWh/year)

$E_{CON}$  = Electricity consumed from the grid by the project (MWh/year).

Considered baseline emissions for period 2011-2012 are 17053 tCO<sub>2</sub>.

The Project does not lead to any leakage.

The detailed algorithms are described later under section E of the PDD.

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The estimated annual average of approximately 8526 tCO<sub>2</sub>e over the crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project.

There are no CAR's or CL's issued in relation with calculation of GHG emissions.

### **3.5 Environmental Impacts**

According to the Alytus Regional Department of Environment conclusion No. 05-V2-144 of 20/01/2004, the environmental impact assessment (EIA) of the planned economic activity is not required.

Environmental protection section of the technical project describes requirements for 300 m sanitary zone (because of generated noise), other environmental aspects (air pollution, soil pollution, impact on biodiversity and landscape) are considered as minor without any requirements for additional control measures.

The Explanatory note of the Project Detailed plan did not raise any significant environmental impacts, either.

The most relevant environmental aspects are sufficiently described in the PDD .

There are no CAR's or CL's issued in relation with Environmental Impacts.

### **3.6 Comments by Local Stakeholders**

In the detailed plan preparation compulsory public consideration procedures were undertaken with possible participation of all stakeholders. The following steps were made during the stakeholder process:

- Public announcement about beginning of Project detailed plan preparation
- Obtained written approval from air force regarding wind turbines erection
- Detailed plan placed in Lazdijai Municipality office for public review
- Received written consents from all neighbour land owners regarding endorsement of Project sanitary zones
- Local stakeholder consultation meeting
- Decision of the board of Lazdijai municipality regarding the approval of the project detailed plan.
- Obtained protocol of hygiene examination of the project documentation prepared by Alytus centre of public health (Visuomenes sveikatos centras)
- Conclusion of the Alytus regional department for environmental protection regarding the approval of the technical project for the issuance of building permit
- Decision of the board of Lazdijai municipality regarding the issuance of building permit.

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Local stakeholder consultation meeting to discuss stakeholder concerns on the proposed Project was held on 26/03/2004. Meeting has accepted proposed detailed plan of the project. The Project detailed plan was finally approved on 11/05/2004.

There are no CAR's or CL's issued in relation with Comments by Local Stakeholders.

#### **4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS**

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

Bureau Veritas Certification published the project documents on the UNFCCC JI website (<http://JI.unfccc.int>) on 14/01/2011 and invited comments within 12/02/2011 by Parties, stakeholders and UNFCCC accredited observers.

No comments were received.

#### **5 DETERMINATION OPINION**

Bureau Veritas Certification has performed a determination of the "Seirijai wind power park" in Lithuania. The determination was performed on the basis of UNFCCC criteria and the 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, baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

The project participant used the latest tool for the demonstration of additionality. In line with this tool, the PDD provides the analysis of investment, technological and other barriers to determine that the project activity itself is not the baseline scenario.

By synthetic description of the project, the project is likely to result in reductions of GHG emissions. The analysis of investment and technological barriers demonstrates that the proposed project activity is not a likely 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



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designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 03) 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 applied 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.



## 6 REFERENCES

### Category 1 Documents:

Documents provided by Gemba, UAB that relate directly to the GHG components of the project.

- /1/ Project Design Document, version 01, 02/11/2010
- /2/ Project Design Document, version 03, 23/08/2011
- /3/ Excel spread sheet for financial IRR calculation, version dated 02/11/2010
- /4/ Excel spread sheet for financial IRR calculation, version dated 23/08/2011

### Category 2 Documents:

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

- /1/ Expertise about the wind potential and the energy output of wind turbines, made by Enercon GmbH, dated January 2005
- /2/ Lithuania's national allocation plan for greenhouse gas emission allowances for the period 2008 to 2012
- /3/ Permit to enhance the energy generation capacity on 6 MW No.LP-0210, issued on 26/01/2009
- /4/ Detailed plan on wind park, approved by Lazdijai municipality on 11/05/2004
- /5/ Constructional permit on substation reconstruction, issued by Lazdijai municipality on 24/08/2010
- /6/ Conclusion No. 05-V2-144 20/01/2004 issued by Alytus Regional Department of Environment (regarding the environmental impact assessment of the planned economic activity)
- /7/ The letter of Endorsement (LoE) No.(10-7)-D8-2752 issued by the Lithuanian Ministry of Environment on 31/03/2009
- /8/ The letter of Approval (LoA) (10-2)-D8-10511 issued by the Lithuanian Ministry of Environment on 25/11/2011

### 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/ Mr. Aleksas Jakštas, CEO

## APPENDIX A: SEIRIJAI WIND POWER PARK PROJECT DETERMINATION PROTOCOL

**Table 1 Mandatory Requirements for Joint Implementation (JI) Projects**

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	Letter of Approval has not been issued yet, according to the Lithuanian Joint Implementation Project development rules, the final Project approval or Letter of Approval might be issued only after the draft Project determination report submission to the Lithuanian DFP. See related CAR1 in Table 2 below.	Table 2, Section A.5
Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	See related CAR's and CL's in Table 2 below.	Table 2, Section B
The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	O.K.	
The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	O.K.	



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	Lithuania has indicated the designated national focal point and published national JI guidelines on JI website. The Ministry of Environment is the designate national focal point for Lithuania.	
The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	Lithuania is Annex 1 party and has ratified the Kyoto protocol on 03 January 2003.	
The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	O.K.	
The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	The national registry was established on 14 November 2005 and is under the supervision of the Lithuanian Environmental Investment Fund (LAAIF).	
Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	The first PDD (Version 01) was submitted to Bureau Veritas on December 2010.	
The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall	Marrakech Accords,	Version 01 was made publicly available on UNFCCC website	



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
be invited to, within 30 days, provide comments.	JI Modalities, §32	on 14/01/2011. No comments have been received.	
Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	According to the Communication No. 05-V2-144 of the Alytus Regional Department of Environment of the Lithuanian Ministry of Environment of 20/01/2004, the environmental impact assessment (EIA) of the planned economic activity is not required. Environmental part of technical project has not identified any requirement for special control measures of the environmental aspects.	Table 2, Section F
The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	The baseline is the scenario that reasonably represents the GHG emissions that would occur in the absence of the proposed project.	Table 2, Section B
A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	The baseline is established acceptably.	Table 2, Section B
The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities,	There are no requests to earn such ERUs in the baseline methodology.	Table 2, Section B



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	Appendix B		
The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	There is an appropriate monitoring plan in place, see Table 2.	Table 2, Section D
1. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	Glossary of Joint Implementation Terms, Version 03	Gemba, UAB is a legal entity authorized by the Lithuanian DFP. The project idea (project idea note) was approved by the Lithuanian DFP (Ministry of Environment of the Republic of Lithuania) and the Letter of Endorsement (LoE) No. (10-7)-D8-2752 was issued on 31/03/2009.	Table 2, Section A

**Table 2 Requirements Checklist**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<b>A. General Description of the project</b>					
<b>A.1 Title of the project</b>					
A.1.1. Is the title of the project presented?		DR	The title "Seirijai wind power park" is presented.	O.K.	O.K.
A.1.2. Is the current version number of the document presented?		DR	The current version is presented (version 01).	O.K.	O.K.
A.1.3. Is the date when the document was completed presented?		DR	The PDD Version 03 was completed on 03/04/2011.	O.K.	O.K.
<b>A.2. Description of the project</b>					
A.2.1. Is the purpose of the project included?		DR I	The description of the project activity is described in a clear and transparent manner, by explaining how greenhouse gas emissions will be reduced. It is planned to install 3 units of Enercon E-82 type wind turbines manufactured by German company Enercon GmbH. The wind power park, in a conservative approach, will generate about 13,62 GWh of electricity per year.		



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?		DR	<p>The project will reduce greenhouse gas emissions by partially substituting electricity production in other power plants of Lithuania that run on fossil fuel.</p> <p><u>Clarification action request:</u> Please, provide the evidence that the estimated annual production is confirmed by experts. Please, explain why in the PDD page 2 the information is provided that the estimated annual production is 14,1 GWh (not 13,9 as stated on page 5). Also please explain why transmission losses at the substations and power lines are not estimated.</p>	CL1	O.K.
<b>A.3. Project participants</b>					
A.3.1. Are project participants and Party(ies) involved in the project listed?		DR	Yes.	O.K.	O.K.
A.3.2. Are project participants authorized by a Party involved?		DR	Gemba, UAB is a legal entity authorized by the Lithuanian DFP. The project idea (project idea note) was approved by the Lithuanian DFP (Ministry of Environment of the Republic of Lithuania) and the Letter of Endorsement (LoE) No. (10-7)-D8-2752 was issued on 31/03/2009.	O.K.	O.K.
A.3.3. The data of the project participants are presented in tabular format?		DR	All the data of the project participants and	O.K.	O.K.



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Parties are presented.		
A.3.4. Is contact information provided in annex 1 of the PDD?		DR	Yes.	O.K.	O.K.
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?		DR	The host Party involved is Lithuania, this is indicated in the PDD.	O.K.	O.K.
<b>A.4. Technical description of the project</b>					
<b>A.4.1. Location of the project activity</b>					
A.4.1.1. Host Party(ies)		DR	Yes.	O.K.	O.K.
A.4.1.2. Region/State/Province etc.		DR	Yes.	O.K.	O.K.
A.4.1.3. City/Town/Community etc.		DR	Yes.	O.K.	O.K.
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)		DR	<u>Clarification action request:</u> Please, explain what kind of coordinates is provided for wind turbines (PDD section A.4.1.4.).	CL2	O.K.
<b>A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project</b>					
A.4.2.1. Does the project design engineering reflect current good practices?		DR	The project reflects a standard wind park with new equipment.	O.K.	O.K.
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?		DR	This project is approximately of the same technology level to compare with other wind parks already operating in Lithuania.	O.K.	O.K.
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?		DR	It is not likely that the project technology might be substituted by better technologies within the project period.	O.K.	O.K.





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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?		DR	It is planned that the operation and maintenance work will be done by Enercon that will have an agreement on such services with Gemba, UAB.	O.K.	O.K.
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?		DR	The PDD does not provide provisions for meeting training needs, because Gemba, UAB does not have technical personnel. All daily operation work will be subcontracted to Enercon.	O.K.	O.K.
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)		DR	It is stated clearly that GHG emission reductions will be achieved by displacing electricity production from fossil fuel sources with the electricity produced by the wind power plant. It is explained why the emission reductions will not occur in the absence of the proposed Project.	O.K.	O.K.
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?		DR	The estimation of emission reductions is provided over all the crediting period (17053 tonnes). Will be verified when CL1 is resolved.	CL1	O.K.
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO <sub>2</sub> e?		DR	The estimated annual emission reduction is 8526 tonnes of CO <sub>2</sub> equivalent. Will be	CL1	O.K.



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			verified when CL1 is resolved		
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?		DR	The data are presented in tabular format in the PDD section A.4.4.1.	O.K.	O.K.
<b>A.5. Project approval by the Parties involved</b>					
A.5.1. Are written project approvals by the Parties involved attached?		DR	The written project approval is not attached. According to Lithuanian JI guidelines the final Project approval might be issued only after the Project determination report submission to the Lithuanian DFP. <u>Corrective action request:</u> The approval letter from the Lithuanian DFP should be submitted.	CAR1	O.K.
<b>B. Baseline</b>					
<b>B.1. Description and justification of the baseline chosen</b>					
B.1.1. Is the chosen baseline described?		DR	The chosen baseline is described in detail.	O.K.	O.K.
B.1.2. Is it justified the choice of the applicable baseline for the project category?		DR	The chosen baseline and baseline emission factor are based on methodology used by the Lithuanian Ministry of Environment to allocate allowances for JI projects in the National Allocation Plan for greenhouse gas emission allowances for the period 2008 to 2012. The presented emission factor is widely	O.K.	O.K.



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			used for other already determined Lithuanian JI wind projects: No.0025, No.0034, No.0163, No.0178, No.0200, No.0205.		
B.1.3. Is it described how the methodology is applied in the context of the project?		DR	The description how the methodology is applied in the context of the project is acceptable.	O.K.	O.K.
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?		DR	See B.1.2 above.	O.K.	O.K.
		DR	All data sources are clearly referenced (the PDD section B1 Table).	O.K.	O.K.
B.1.5. Is all literature and sources clearly referenced?		DR	The description how the methodology is applied in the context of the project is acceptable.	O.K.	O.K.
<b>B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project</b>			See B.1.2 above.		
B.2.1. Is the proposed project activity additional?		DR	Version 05.2 of the CDM tool for the demonstration and assessment was used. However, additionality is not proven correctly, see CAR's and CL's below in table sections 1. Additionality of the project activity <i>and</i> 2. Investment analysis.	CAR's, CL's	
<b>1. Additionality of a project activity</b>					
a. Does the PDD state the latest version of the additionality tool being used?			The latest methodological tool "Tool for the demonstration and assessment of	O.K.	O.K.



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			additionality (version 05.2)" was used.		
b. Has the tool used the following steps to assess additionality <ol style="list-style-type: none"> <li>1. Identification of alternatives to the project activity</li> <li>2. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible</li> <li>3. Barriers analysis; and</li> <li>4. Common practice analysis.</li> </ol>	Ver 05.2	DR	The tool has used all the steps required by "Tool for the demonstration and assessment of additionality (version 05.2)".	O.K.	O.K.
c. In Step 1 have all the sub-steps as below followed <ol style="list-style-type: none"> <li>1. Sub-step 1a: Define alternatives to the project activity</li> <li>2. Sub-step 1b: Consistency with mandatory laws and regulations</li> </ol>	Ver 05.2	DR	Yes, Sub-step 1a and 1b are described.	O.K.	O.K.
d. Have the following alternatives been included while defining alternatives as per sub-step 1a <ol style="list-style-type: none"> <li>1. (a) The proposed project activity undertaken without being registered as a JI project activity</li> <li>2. (b) Other realistic and credible alternative scenario(s) to the proposed JI project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology</li> <li>3. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).</li> </ol>	Ver 05.2	DR	Alternative scenarios to the project activity have been defined: Alternative A: the proposed project activity is not undertaken as a JI project activity; Alternative B: the electric power in the Lithuanian network will be produced by new modern cogeneration power plants.  Continuation of the current situation is not applicable, because it is a "green field" project.	O.K.	O.K.
e. Has the project participant included the technologies or	Ver	DR	New modern cogeneration power plants are	O.K.	O.K.



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practices that provide outputs or services with comparable quality, properties and application areas as the proposed JI project activity and that have been implemented previously or are currently being introduced in the relevant country/region.	05.2		comparable with the proposed JI project activity and are being introduced in Lithuania (Panevezys CHP).		
f. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	Ver 05.2	DR	See d) above.	O.K.	O.K.
g. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.	Ver 05.2	DR	The requirements are described, all alternatives are in compliance with mandatory applicable legal and regulatory requirements.	O.K.	O.K.
h. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country.	Ver 05.2	DR	Not applicable.	O.K.	O.K.
i. Has the outcome of Step 1b identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	Ver 05.2	DR	The outcome of Step 1 is that all alternatives are in compliance with mandatory laws.	O.K.	O.K.
j. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3.)	Ver 05.2	DR	Step 2 (Investment analysis) has been selected.	O.K.	O.K.



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
k. In step 2 have all the sub-steps as below followed? 1. Sub-step 2a: Determine appropriate analysis method 2. Sub-step 2b: Option I. Apply simple cost analysis 3. Sub-step 2b: Option II. Apply investment comparison analysis 4. Sub-step 2b: Option III. Apply benchmark analysis 5. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III) 6. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	Ver 05.2	DR	Step 2 has all sub-steps for benchmark analysis (Option III).	O.K.	O.K.
l. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below 1. Simple cost analysis if the JI project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than JI related income (Option I). 2. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	Ver 05.2	DR	Option III is used.	O.K.	O.K.
m. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis 1. Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	Ver 05.2	DR	Not applicable.	O.K.	O.K.
n. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis	Ver 05.2	DR	IRR (Internal rate of return) is used.	O.K.	O.K.



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify					
o. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis <ol style="list-style-type: none"> <li>1. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.</li> <li>2. When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.</li> <li>3. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees</li> </ol>	Ver 05.2	DR	For Sub-step 2b below provided guideline was followed, it means benchmark analysis applied: <ol style="list-style-type: none"> <li>1. Identified the financial/economic indicator (IRR), most suitable for the project type and decision context.</li> <li>2. The financial/economic analysis based on parameters that are standard in the market, considering the specific characteristics of the project type and not linked to the subjective profitability expectation or risk profile of a particular project developer.</li> <li>3. In order to apply a benchmark comparable to the project IRR the project developer selected to use average value of the interest rate (AVIR) on loans for non-financial corporations, published by the central bank of Lithuania.</li> </ol>	O.K.  O.K.	O.K.  O.K.



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<p>required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified.</p> <p>Please specify benchmark and justify.</p>			<p>Clarification action request: Please present the link in JI-PDD of selected benchmark data which is public available.</p>	CL3	O.K.
<p>a. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III):</p> <p>1. Calculate the suitable financial indicator for the proposed JI project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public</p>	Ver 05.2		<p>The project IRR was calculated comparing project activities with and without ERUs income.</p> <p>1. All relevant costs and revenues have been included to the IRR calculation for the proposed JI project activity.</p>	O.K.	O.K.





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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<p>investors if this is standard practice for the selection of public investments in the host country.</p> <p>2. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the JI-PDD, or in separate annexes to the JI-PDD.</p> <p>3. Justify and/or cite assumptions.</p>			<p>2. The investment analysis is presented in separate annexes of JI-PDD.</p> <p>3. Most assumptions are clearly justified with suitable documentation in the separate sheet „Assumpt“, except of listed in CAR2 and CAR3.</p>	O.K.	O.K.
			<p><u>Correction action request:</u> Please include descriptions in the assumption sheet:</p> <ul style="list-style-type: none"> <li>- reason why electricity selling price have changed and risen from the year 2021;</li> <li>- reason why operating expenses rise every year;</li> <li>- please supplement assumption about ERU's price by new data about commission rate and clearly justify with a suitable document;</li> <li>- applied interest rate for shareholder's loan and please clearly justify with a suitable document;</li> <li>- describe used benchmark rate;</li> </ul>	CAR2	O.K.



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<p>4. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions</p> <p>5. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.</p> <p>6. Present in the JI-PDD a clear comparison of the financial indicator for the proposed JI activity. Please specify details for above.</p>			<p><u>Corrective action request:</u> Please, clearly justify assumptions with suitable documentation valid on the time of investment decision taken: - annual maintenance costs; - total investment costs; - electricity price; - AVIR value.</p> <p>4. No project's risks were included in the IRR calculation.</p> <p>5. Assumptions and all used input data for the investment analysis are not differ across the project activity will be verified when CAR2 and CAR3 will be resolved.</p> <p>6. Please present the corrected PDD when CAR's and CL's above are resolved.</p>	CAR3  O.K.  CAR2, CAR3  CL4	O.K.  O.K.  O.K.  CL4
<p>b. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III):</p> <p>1. Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.</p>	Ver 05.2	DR	<p>According to the Tool for the Demonstration and Assessment of Additionality, v.05.2, the minimal variation range should be in <math>\pm 10\%</math> level. These variable parameters were used with variation range in <math>\pm 10\%</math>:</p> <p>1) Energy tariff variation after 2020; 2) Annual Electricity Output; 3) ERUs sale price. Total investment costs and maintenance</p>	O.K.	O.K.



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			<p>costs are fixed in the contract with Enercon, therefore there is not neccary to include these costs to sensivity analysis.</p> <p>The sensivity analysis proves that that the Project IRR becomes higher than the benchmark IRR when energy output increase more than 10%. These circumstances was taken into account as additional proof:</p> <p>1) It is more likely that forecasted energy output will not be reached rather then exceeded. Estimated capacity factor is: <math>13\ 620\ \text{MWh} / 6\ \text{MW} * 8760\ \text{hours} = 0,259</math> or 25,9 %. Verification expierance of an other wind farms in Lithuania with the same E-82 type turbines shows , that real capacity factor varies from 20 to 26 percent depending from year. More over, Seirijai wind park is not in see shore zone (more then 250 kilometres from shore), this also increse possibility that forecasted energy output will not be reached.</p> <p>2) AVIR's is in itself a conservative benchmark as it does not take into account the commercial lending rates of individual private sector banks which are typically higher than AVIR because of added bank margin.</p>		
c. Has the outcome of Step 2 clearly mentioned	Ver	DR	The sensitivity analysis confirms the fact	O.K.	O.K.



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with justification?	05.2		that the project is not enough financially attractive and revenues from ERUs sale gives the chance to improve its financial figures.		
d. In step 3: Barrier analysis have all the sub-steps as below followed? 1. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity 2. Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity):	Ver 05.2	DR	Not applied.	O.K.	O.K.
e. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project 1. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin. 2. (b) Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and	Ver 05.2	DR	Not applied.	O.K.	O.K.



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<p>malfunctioning or other underperformance; Lack of infrastructure for implementation and logistics for maintenance of the technology, Risk of technological failure: the process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.</p> <p>3. (c) Barriers due to prevailing practice: The project activity is the “first of its kind”.</p> <p>4. (d) Other barriers, preferably specified in the underlying methodology as examples.</p>					
<p>f. Has the outcome from Step 3a clearly mentioned in PDD?</p>	Ver 05.2	DR	Not applied.	O.K.	O.K.
<p>g. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity):</p> <p>1. If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the implementation of at least one of the alternatives.</p>	Ver 05.2	DR	Not applied.	O.K.	O.K.



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<p>Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration.</p> <p>2. provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers.</p> <p>3. The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of relevant market data (e.g. market prices, tariffs, rules); (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others.</p> <p>Please specify.</p>					
<p>h. Has the outcome from Step 3 clearly mentioned in PDD?</p>	Ver 05.2	DR	Not applied.	O.K.	O.K.



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i. In step 4: Common practise analysis have all the sub-steps as below followed? 1. Sub-step 4a: Analyze other activities similar to the proposed project activity 2. Sub-step 4b: Discuss any similar Options that are occurring	Ver 05.2	DR	Step 4 has all the sub-steps (sub-step 4a and sub-step 4b).	O.K.	O.K.
j. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity 1. Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other JI project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.	Ver 05.2	DR	Other wind parks in Lithuania are analysed. The information is provided and proved that all larger scale wind power parks in Lithuania are developed as JI projects.	O.K.	O.K.
k. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring: 1. If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it	Ver 05.2	DR	Clarification action request: Please, clarify why Sub-step 4b is used if there are no similar wind power projects in Lithuania.	CL5	O.K.



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financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.					
l. Has the outcome from Step 4 clearly mentioned in PDD?	Ver 05.2	DR	There are no similar activities, because all wind power parks in Lithuania are implemented as JI projects.	O.K.	O.K.
m. Has it been proved that the project is additional?	Ver 05.2	DR	The additionality is assumed as proved when CAR 2-3 and CL 3-5 are resolved.	CAR's, CL's	O.K.
<b>4. Investment Analysis</b>					
a. Is the period of assessment limited to the proposed crediting period of the JI project activity.	EB 41	Ann ex 45	The period of assessment is not limited to the proposed crediting period. The project started in 2010, but project activity started and the first income earned in 2011. The period of assessment is 2011-2031 comparing to the crediting period of February 2011 – December 2012.	O.K.	O.K.
b. Do the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period.	EB 41	Ann ex 45	The project IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime).	O.K.	O.K.





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c. Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB 41	Ann ex 45	<p>Operating and maintenance cost are included in the calculation of project IRR.</p> <p><u>Correction action request:</u>            - In calculation of operating expenses (EPK maintenance) the incorrect formula has been used for the period of 2011 Q1.            - Other operating expenses should be calculated for the 2 month in the period of 2011 Q1.</p> <p><u>Clarification action request:</u>            Please justify why the value of EPK maintenance is positive in the year 2031 while values of EPK maintenance are negative in all previous years.</p>	O.K.  CAR4  CAR5  CL6	O.K.  O.K.  O.K.
d. Do the Project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 41	Ann ex 45	The period of IRR assessment reflects the period of expected operation of the underlying project activity.	O.K.	O.K.
e. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 41	Ann ex 45	The fair value of the project activity assets was not included as a cash inflow in the final year because of on the end of project lifetime period (i.e. 2031), the fixed assets of the company shall amount to 0 LTL and old turbines as well as foundations will be dismantled for its residue values.	O.K.	O.K.
f. Has the fair value been calculated in	EB	Ann	See section e above.	O.K.	O.K.



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accordance with local accounting regulations where available, or international best practice.	41	ex 45			
g. Do the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 41	Ann ex 45	See section e above.	O.K.	O.K.
h. Is depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 41	Ann ex 45	Depreciation has been added back to net profit for the purpose of calculating the IRR.	O.K.	O.K.
i. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other comparator is intended for post-tax comparisons?	EB 41	Ann ex 45	Corporate taxes has been included as an expenses in the IRR calculation.  <u>Correction action request:</u> The incorrect formula has been used in the calculation of Corporate tax in the period of the year 2011.	O.K.  CAR6	O.K.  O.K.
j. Are the input values used in all investment analysis valid and applicable at the time of the investment decision taken by the project participant?	EB 41	Ann ex 45	<u>Clarification action request:</u> Please, indicate the time (with relevant documents) of the investment decision taken	CL7	O.K.
k. Is the timing of the investment decision and the consistency and appropriateness of the input values with the time when the investment decision was taken?	EB 41	Ann ex 45	See the section h above.	CL7	O.K.
l. Have all the listed input values been consistently applied in all calculations?	EB 41	Ann ex 45	All the listed input values have been consistently applied in all calculations.	O.K.	O.K.
m. Does the investment analysis reflect the	EB	Ann	To avoid the opportunity of the project	O.K.	O.K.



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economic decision making context at point of the decision to recommence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the JI?	41	ex 45	failure the Company will insure the activity and entire wind power park during the project lifetime. Therefore the investment analysis doesn't reflect the economic decision making context at point of the decision to recommence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the JI.		
n. Have Project participants supplied the spreadsheet versions of all investment analysis?	EB 41	Ann ex 45	The spreadsheet of all investment analysis has been supplied.	O.K.	O.K.
o. Are all formulas used in this analysis readable and all relevant cells viewable and unprotected?	EB 41	Ann ex 45	All formulas used in spreadsheet are readable; all cells are viewable and unprotected.	O.K.	O.K.
p. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	EB 41	Ann ex 45	The spreadsheet will be provided on the UNFCCC internet page.	O.K.	O.K.
q. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
r. Does the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB 41	Ann ex 45	The cost of financing expenditures is not included in the calculation of project IRR.	O.K.	O.K.
s. In the calculation of equity IRR has only the portion of investment costs which is financed by equity	EB 41	Ann ex	Not applicable.	O.K.	O.K.



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been considered as the net cash outflow?		45			
t. Has the portion of the investment costs which is financed by debt been considered a cash outflow in the calculation of equity IRR? (this is not allowed)	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
u. In cases where a benchmark approach is used, is the applied benchmark appropriate to the type of IRR calculated?	EB 41	Ann ex 45	Applied benchmark appropriate to the type of IRR calculated.	O.K.	O.K.
v. Have local commercial lending rates or weighted average costs of capital (WACC) been selected as appropriate benchmarks for a project IRR?	EB 41	Ann ex 45	AVIR is selected as appropriate benchmark for a project IRR.	O.K.	O.K.
w. Have required/expected returns on equity been selected as appropriate benchmark for an equity IRR?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
x. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
y. In the cases of projects which could be developed by an entity other than the project participant, is the benchmark applied based on publicly available data sources which can be clearly validated?	EB 41	Ann ex 45	See description in the CL1	CL1	O.K.
z. Have Internal company benchmarks/expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC) been applied in cases where there is only one possible project developer?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
aa. Has it been demonstrated to have been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.



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the country/region?					
bb. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
cc. Has a thorough assessment of the financial statements of the project developer - including the proposed WACC - to assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects been conducted?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
dd. Do the risk premiums applied in the determination of required returns on equity reflect the risk profile of the project activity being assessed, established according to national/international accounting principles? (It is not considered reasonable to apply the rate general stock market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
ee. Has an investment comparison analysis and not a benchmark analysis been used when the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
ff. Have variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues been subjected to reasonable variation (positive and negative) and the results of this variation been presented in the PDD and be reproducible in the associated spreadsheets?	EB 41	Ann ex 45	The Electricity production (MWh), ERUs price and Investments, ths. LTL were chosen as variables, which possible constitute 20% (from -20% to +20%) of the total project revenue and/or costs. Results of the variations have been presented in sensitivity analysis correctly.	O.K.	O.K.



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			<u>Correction action request:</u> Incorrect values of variable IRR have been presented in the sensitivity analysis.	CAR7	O.K.
gg. Has a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a material impact on the analysis ?	EB 41	Ann ex 45	The maintenance costs were not used for sensitivity analysis because these costs are fixed in the obtained proposal from Enercon.	O.K.	O.K.
hh. Is the range of variations selected reasonable in the project context?	EB 41	Ann ex 45	The range of variations is reasonable in the project context.	O.K.	O.K.
ff. Do the departure variations in the sensitivity analysis at least cover a range of +10% and 10%, unless this is not deemed appropriate in the context of the specific project circumstances?	EB 41	Ann ex 45	The departure variations in the sensitivity analysis cover a range of +30% and -30%.	O.K.	O.K.
jj. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative is an assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity?	EB 41	Ann ex 45	An assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity.	O.K.	O.K.
B.2.2. Is the baseline scenario described?		DR	The baseline scenario is described in the PDD Section A.2. It was estimated that Lietuvos Elektrine (the biggest electric power producer in Lithuania) by generating 1 MWh of electric power contributes to the	O.K.	O.K.



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			pollution of atmosphere with 0,626 tones of CO <sub>2</sub> .		
B.2.3. Is the project scenario described?		DR	The project scenario is described in the PDD Section A.2. The wind power park, in a conservative approach, will generate about 39,1 GWh of electric power per year. Such wind park's generation will lead 8526 tCO <sub>2</sub> /year emission reductions on the side of Lietuvos Elektrine.	CL1	O.K.
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?		DR	Yes, see B.2.2 and B.2.3 above.	O.K.	O.K.
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?		DR	Yes.	O.K.	O.K.
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?		DR	National policies are summarized in the PDD Section B2, sub-step 1b.	O.K.	O.K.
<b>B.3. Description of how the definition of the project boundary is applied to the project activity</b>					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?		DR	The spatial boundaries comply with the statements in the PDD.	O.K.	O.K.
<b>B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline</b>					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?		DR	The date of the baseline setting is 23/08/2011.	O.K.	O.K.
B.4.2. Is the contact information provided?		DR	The contact information is provided in the	O.K.	O.K.



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			PDD section B.4.		
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	CEO Aleksas Jakštas has developed the Baseline setting and is also the project participant listed in Annex 1.	O.K.	O.K.
<b>C. Duration of the small-scale project and crediting period</b>					
<b>C.1. Starting date of the project</b>					
C.1.1. Is the project's starting date clearly defined?		DR	The starting date is indicated (winning of auction on connection to the national grid – organized by Lietuvos energija, AB) 29/10/2008.	O.K.	O.K.
<b>C.2. Expected operational lifetime of the project</b>					
C.2.1. Is the project's operational lifetime clearly defined in years and months?		DR	The planned operational lifetime of the wind park is 20 years. It is validated from the operational life of the equipment. The lifetime is defined in years and months.	O.K.	O.K.
<b>C.3. Length of the crediting period</b>					
C.3.1. Is the length of the crediting period specified in years and months?		DR	The crediting period is clearly defined (2 years and 0 month – starting from 1 January 2011.	O.K.	O.K.
<b>D. Monitoring Plan</b>					
<b>D.1. Description of monitoring plan chosen</b>					
D.1.1. Is the monitoring plan defined?		DR	The monitoring plan is defined in Section D and Annex 3.	O.K.	O.K.
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.		DR	The park's energy consumption from the grid value will be covered by an equal value	O.K.	O.K.





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			of generated power, i.e. the power supplied to the national grid will be reduced by this value. It means power consumption emissions will be accounted and therefore the project emissions are considered equal to zero.		
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.		DR	Not applicable, project emissions are considered equal to zero.	O.K.	O.K.
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).		DR	Not applicable, project emissions are considered equal to zero.	O.K.	O.K.
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.		DR	The monitoring of the net power dispatched to the grid will be measured by a commercial power meter. The data from the meter will be transferred to AB Lietuvos energija side by SCADA system (through telemetry). AB Lietuvos energija will send the deeds of transfer and acceptance to the wind power park owner. After the data verification of the received deeds of transfer and acceptance the invoices from Gemba, UAB will be issued. The data on the net energy output into the national grid is also available on the national grid operator website.	O.K.	O.K.
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO2 equivalent).		DR	The formula required to estimate the baseline scenario emission is defined.	O.K.	O.K.



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D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)		DR	Not applicable.	O.K.	O.K.
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.		DR	Not applicable.	O.K.	O.K.
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc.; emissions/emission reductions in units of CO2 equivalent).		DR	Not applicable.	O.K.	O.K.
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.		DR	No leakage is expected.	O.K.	O.K.
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO2 equivalent).		DR	No leakage is expected.	O.K.	O.K.
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).		DR	Since the project emissions are considered to be zero, the emission reductions are the same as the baseline emissions.	O.K.	O.K.
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?		DR, I	After installing the wind power plant the measurements of the noise level will be undertaken.	O.K.	O.K.
D.1.14. Is reference to the relevant host Party regulation(s) provided?		DR, I	References are provided.	O.K.	O.K.
D.1.15. If not applicable, is it stated so?		DR, I	See D.1.12 above.	O.K.	O.K.
<b>D.2. Qualitative control (QC) and quality assurance (QA)</b>					



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<b>procedures undertaken for data monitored</b>					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?		DR	The procedures are briefly described in the PDD section D.3.	O.K.	O.K.
<b>D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan</b>					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project		DR	The responsibilities are defined in the PDD section D.3. Gemba, UAB has two employees – CEO and chief accountant. All monitoring and reporting activities will be managed by CEO (Director).	O.K.	O.K.
<b>D.4. Name of person(s)/entity(ies) establishing the monitoring plan</b>					
D.4.1. Is the contact information provided?		DR	Yes.	O.K.	O.K.
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	Yes.	O.K.	O.K.
<b>E. Estimation of greenhouse gases emission reductions</b>					
<b>E.1. Estimated project emissions</b>					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project ?		DR	The project emissions are considered to be equal to 0, because the energy consumption from the grid value will be covered by an equal value of generated power, i.e. the power supplied to the national grid will be reduced by this value.	O.K.	O.K.



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E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?		DR	Not applicable.	O.K.	O.K.
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?		DR	Not applicable.	O.K.	O.K.
<b>E.2. Estimated leakage</b>					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?		DR	No leakage is expected, therefore, section E.2 is not applicable.	O.K.	O.K.
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?		DR	Not applicable.	O.K.	O.K.
E.2.3. Have conservative assumptions been used to calculate leakage?		DR	Not applicable.	O.K.	O.K.
<b>E.3. The sum of E.1 and E.2.</b>					
E.3.1. Does the sum of E.1. and E.2. represent the small-scale project activity emissions?		DR	Not applicable.	O.K.	O.K.
<b>E.4. Estimated baseline emissions</b>					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?		DR	Baseline emissions (BE) are calculated as follows:  $ER = E_{SP} \times EF_{GRID}$ Where, ER - emission reductions, tCO2 E <sub>SP</sub> – net power dispatched to the grid from Seirijai wind power park (difference between supplied into grid power and consumed)	O.K.	O.K.



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			<p>from the grid power), kWh</p> <p><math>EF_{GRID}</math> – emission factor for power production in Lithuania, 0,626 tCO<sub>2</sub>/MWh.</p> <p><math>E_{SP} = E_{SUP} - E_{CON}</math></p> <p>Where:</p> <p><math>E_{SUP}</math> = Electricity supplied to the grid by the project (MWh/year)</p> <p><math>E_{CON}</math> = Electricity consumed from the grid by the project (MWh/year).</p>		
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified in for the applicable project category?		DR	See E.4.1 above.	O.K.	O.K.
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?		DR	Yes, $E_{FCO2}$ – the emission factor for power production in Lithuania, 0,626 tCO <sub>2</sub> /MWh is a conservative value. The recent legal requirements for local climate change projects support schemes defines 0,707 tCO <sub>2</sub> /MWh value.	O.K.	O.K.
<b>E.5. Difference between E.4. and E.3. representing the emission reductions of the project</b>					
E.5.1. Does the difference between E.4 and E.3 represent the emission reductions due to the project during a given period?		DR	Yes.	O.K.	O.K.
<b>E.6. Table providing values obtained when applying formulae above</b>					
E.6.1. Is there a table providing values of total CO <sub>2</sub> abated?		DR	Yes, Table in PDD section E.5 provides values of estimated emission reductions	O.K.	O.K.



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			(total 17053 tCO <sub>2</sub> ) during all crediting period.		
<b>F. Environmental Impacts</b>					
<b>F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party</b>					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?		DR, I	The relevant minor environmental impacts are sufficiently described in the PDD. The explanatory note of the project detailed plan did not raise any significant environmental impacts, either. An environmental impact investigation is not necessary (it is confirmed by a letter from the Ministry of Environment).	O.K.	O.K.
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?		DR, I	See section F.1.1 above.	O.K.	O.K.
F.1.3. Are the requirements of the National Focal Point being met?		DR, I	There were no special requirements from the NFP.	O.K.	O.K.
F.1.4. Will the project create any adverse environmental effects?		DR, I	See section F.1.1 above.	O.K.	O.K.
F.1.5. Are transboundary environmental impacts considered in the analysis?		DR, I	There are no transboundary environmental aspects.	O.K.	O.K.
F.1.6. Have the identified environmental impacts been addressed in the project design?		DR, I	There are no any special measures addressed in the project design except of sanitary zone (300 m) outside which the	O.K.	O.K.



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			turbines' noise level will be lower than the existing requirements of the national hygiene norm HN 33:2007.		
<b>G. Stakeholders' comments</b>					
<b>G.1.Information on stakeholders' comments on the project, as appropriate</b>					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?		DR	<p>During detailed plan preparation process (08/10/2003-05/03/2004) compulsory public consideration procedures were undertaken where stakeholders had possibilities to express his opinion. Local stakeholder consultation meeting to discuss stakeholder concerns on the proposed Project was held on 26/03/2004. Meeting has accepted proposed detailed plan of the project. The Project detailed plan was finally approved on 11/05/2004.</p> <p>Compulsory written agreements of residents in surrounding areas were obtained during the process of detailed planning and technical Project preparation process. Stakeholders have not expressed any objections. The implementation of the public consideration procedures is described in the PDD section G.1. All necessary evidencing documents were provided for the verification.</p> <p>Real project implementation started in 2009</p>	O.K.	O.K.



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			when new investor UAB Gemba invested in this project. Previous Project owner has not started project because was not able to ensure availability of the required financial resources.		
G.1.2. The nature of comments is provided?		DR	See G.1.1 above.	O.K.	O.K.
G.1.3. Has due account been taken of any stakeholder comments received?		DR	See G.1.1 above.	O.K.	O.K.



**Table 3 Baseline and Monitoring Methodologies**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<b>1. Baseline Methodology</b>					
<b>1.1. General</b>					
1.1.1. Does the baseline cover emissions from all gases, sectors and source categories listed in Annex A, and anthropogenic removals by sinks, within the project boundary?		DR, I	The baseline covers emissions from CO2 in the production of electricity from fossil fuel sources listed in Annex 2.	O.K.	O.K.
1.1.2. Is baseline established on a project-specific basis and/or using a multi-project emission factor?		DR	See B.1.2 above.	O.K.	O.K.
1.1.3 Is baseline established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?		DR	See B.1.2 above.	O.K.	O.K.
1.1.4 Is baseline established 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?		DR	See B.1.2 above.	O.K.	O.K.
1.1.5 Is baseline established in such a way that ERUs cannot be earned for decreases in activity levels outside the project activity or due to <i>force majeure</i> ?		DR	The baseline is established without a possibility to earn ERUs.	O.K.	O.K.
1.1.6 Is baseline established taking account of uncertainties and using conservative assumptions?		DR	See B.1.2 above.	O.K.	O.K.
<b>1.2. Additionality</b>					
1.2.1. Was the additionality of the project activity demonstrated and assessed?		DR	See Section 1. <i>Additionality of a project activity</i> above.	O.K.	O.K.
<b>2. Monitoring Methodology</b>					



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<b>2.1. Monitoring plan</b>					
2.1.1. Is a monitoring plan included?		DR	See D.1.1 above.	O.K.	O.K.
2.1.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources and/or anthropogenic removals by sinks of greenhouse gases occurring within the project boundary during the crediting period?		DR	Not applicable.	O.K.	O.K.
2.1.3. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline of anthropogenic emissions by sources and/or anthropogenic removals by sinks of greenhouse gases within the project boundary during the crediting period?		DR	Not applicable.	O.K.	O.K.
2.1.4. Does the monitoring plan provide for the identification of all potential sources of, and the collection and archiving of data on increased anthropogenic emissions by sources and/or reduced anthropogenic removals by sinks of greenhouse gases outside the project boundary that are significant and reasonably attributable to the project during the crediting period?		DR	There are no emission sources and removal by sinks.	O.K.	O.K.
2.1.5. Does the project boundary encompass all anthropogenic emissions by sources and/or removals by sinks of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the JI project?		DR	There are no emission sources and removal by sinks.	O.K.	O.K.
2.1.6. Does the monitoring plan provide for the collection and archiving of information on environmental impacts, in accordance with procedures as required by the host Party, where applicable?		DR	See D.1.13 above.	O.K.	O.K.
2.1.7. Does the monitoring plan provide for quality assurance and control procedures for the monitoring process?		DR	The monitoring plan provides simple quality assurance and control procedures. Electric	O.K.	O.K.



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			power monitoring is standardized and controlled by national law, therefore, related monitoring risks are low. Therefore, a simple management system is sufficient to ensure the reliability of the monitoring process. Also see D.1.5 above.		
2.1.8. Does the monitoring plan provide for procedures for the periodic calculation of the reductions of anthropogenic emissions by sources and/or enhancements of anthropogenic removals by sinks by the proposed JI project, and for leakage effects, if any?		DR	The monitoring plan provides a procedure and form (PDD, Annex 3) for the periodic calculation of the emission reductions. Also see D.1.5 above.	O.K.	O.K.
2.1.9. Does the monitoring plan provide for documentation of all steps involved in the calculations?		DR	The monitoring plan provides for documentation of all steps involved in the calculations. Also see D.1.5 above.	O.K.	O.K.
<b>2.2. Quality Control (QC) and Quality Assurance (QA) Procedures</b>					
2.2.1. Did all measurements use calibrated measurement equipment that is regularly checked for its functioning?		DR	Requirements on commercial electric power meters accuracy are standardized by national legislation ( <a href="http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=292691">http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=292691</a> ). Accuracy class for this type of measurement devices should be not less than 0,5 s, this should be audited during verification process. All commercial electric power meters are the property of national grid operator and it will responsible to ensure conformity on accuracy. Commercial interest of the second party (grid operator) ensures sufficient data reliability.	O.K.	O.K.



DETERMINATION REPORT

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.2.2 Is frequency of monitoring the parameters defined?		DR	The frequency of monitoring is once per month.	O.K.	O.K.

**Table 4      Legal requirements**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<b>1. Legal requirements</b>					
1.1. Is the project activity environmentally licensed by the competent authority?		DR, I	According to the Alytus Regional Department of Environment conclusion, the environmental impact assessment (EIA) of the planned economic activity is not required. Environmental part of technical project was prepared and approved.		
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?		DR, I	The environmental permit is not required.	O.K.	O.K.
1.3. Is the project in line with relevant legislation and plans in the host country?		DR, I	All permits required by legislation are issued: <ul style="list-style-type: none"> <li>• License to increase power production capacity.</li> <li>• Detailed plan to build 3 wind power plants.</li> <li>• Construction license to build 3 wind power plants.</li> </ul>	O.K.	O.K.

**Table 5 Resolution of Corrective Action and Clarification Requests**

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
<p><u>Corrective action request No 1:</u> The project participant has not been authorized by the Lithuanian DFP yet.</p>	Table 2, A.5.1	Project developer provided LoA, issued by Ministry of Environment of the Republic of Lithuania.	The LoA, issued by Ministry of Environment of the Republic of Lithuania on 25/11/2011 was found acceptable to close CAR1. The approval from the investor country will be compulsory for first monitoring report verification. Hence, CAR1 is closed.
<p><u>Corrective action request No 2:</u> Please include descriptions in the assumption sheet:</p> <ul style="list-style-type: none"> <li>- reason why electricity selling price have changed and risen from the year 2021;</li> <li>- reason why operating expenses rise every year;</li> <li>- please supplement assumption about ERU's price by new data about commission rate and clearly justify with a suitable document;</li> <li>- applied interest rate for shareholder's loan and please clearly justify with a suitable document;</li> </ul>	Table 2, 1. Additionality of a project activity, p)	Assumptions are provided in the Excel spread sheet for financial IRR calculation, version dated 27/01/2010.	All assumptions are provided and justified with referenced documents. Hence CAR2 is closed.



## DETERMINATION REPORT

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
- describe used benchmark rate.			
<u>Corrective action request No 3:</u> Please, clearly justify assumptions with suitable documentation for those mayor costs: <ul style="list-style-type: none"> <li>- Enercon wind turbines installation;</li> <li>- Turbines maintenance.</li> </ul>	Table 2, 1. Additionality of a project activity, p)	Project developer provided LoA, issued by Ministry of Environment of the Republic of Lithuania.	The LoA, issued by Ministry of Environment of the Republic of Lithuania on 25/11/2011 was found acceptable to close CAR1.
<u>Corrective action request No 4:</u> In calculation of operating expenses (EPK maintenance) the incorrect formula has been used for the period of 2011 Q1.	Table 2, 2. Investment analysis, c)	Formula is corrected in Excel spread sheet for financial IRR calculation, version dated 23/08/2011.	Sheet "Model" row 15 was reviewed, formula is found in accordance with Enercon commercial proposal conditions, hence CAR4 is closed.
<u>Corrective action request No 5</u> Other operating expenses should be calculated for the 2 month in the period of 2011 Q1.	Table 2, 2. Investment analysis, c)	Mistake is corrected in Excel spread sheet for financial IRR calculation, version dated 23/08/2011.	Mistake is corrected properly, hence CAR5 is closed.
<u>Corrective action request No 6:</u> The incorrect formula has been used in the calculation of Corporate tax in the period of the year 2011.	Table 2, 2. Investment analysis, i)	Mistake is corrected in Excel spread sheet for financial IRR calculation, version dated 23/08/2011.	Mistake is corrected properly, hence CAR5 is closed.
<u>Corrective action request No 7:</u> Incorrect values of variable IRR have been presented in the sensitivity analysis.	Table 2, 2. Investment analysis, ff)	Mistake is corrected in Excel spread sheet for financial IRR calculation, version dated 23/08/2011.	Mistake is corrected properly, hence CAR5 is closed.
<u>Clarification action request No 1:</u> Please, provide the evidence that the	Table 2, A.2.2	Document "Energy year calculation" for project issued by Enecon is provided.	Provided document was reviewed: Enercon has forecasted



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
estimated annual production is confirmed by experts. Please, explain why in the PDD page 2 the information is provided that the estimated annual production is 14,1 GWh (not 13,62 GWh as stated on page 5). Also please explain why transmission losses at the substations and power lines are not estimated.		PDD version 03 is issued, reference to estimated production is corrected to 13,9 GWh.	4,829 GWh annual production for 1 wind turbine. Taking in to account that project involves 3 wind turbines and assumption of 0,96 coefficient for availability and losses estimated annual production (13,62 GWh/year) is reasonable. Hence CL is closed.
<u>Clarification action request No 2:</u> Please, explain what kind of coordinates is provided for wind turbines (PDD section A.4.1.4.) in the PDD section A.4.1.4.	Table 2, A.4.1.4	PDD version 03 is issued with clarification (coordinates are from engineering network plan).	O.K.
<u>Clarification action request No 3:</u> Please present the link in PDD of selected benchmark data which is public available.	Table 2, 1. Additionality of a project activity, o)	Reference is provided: <a href="http://www.lb.lt/eng/statistic/index.html">http://www.lb.lt/eng/statistic/index.html</a>	O.K
<u>Clarification action request No 4:</u> Please present the corrected PDD when CAR's and CL's above are resolved.	Table 2, 1. Additionality of a project activity, p)	PDD version 03 is issued, all changes related with closure of CL's and CAR's are included.	PDD version 03 is reviewed and found consistent with changes dedicated to resolve CL's and CAR's.
<u>Clarification action request No 5:</u> Please, clarify why Sub-step 4b is used if there are no similar wind power projects in Lithuania.	Table 2, 1. Additionality of a project activity, z)	It is used just as additional information to argue why all similar projects are implemented as JI projects.	O.K.
<u>Clarification action request No 6:</u>	Table 2, 2.	Excel spread sheet "Additional data"	Excel spread sheet for financial





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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please justify why the value of EPK maintenance is positive in the year 2031 while values of EPK maintenance are negative in all previous years.	Investment analysis, c)	column "AB", row 15 is corrected.	IRR calculation, version dated 23/08/2011 was reviewed, mistake is removed properly, hence CL6 is closed.
<u>Clarification action request No 7:</u> Please, indicate the time (with relevant documents) of the investment decision taken.	Table 2, 2. Investment analysis, k)	The decision of the board on preparation business plan for Project development including JI consideration is indicated as decision date.	Explanation is provided in the PDD version 03 section A.4.3. All assumptions used for investment analysis was valid at that time.

## APPENDIX B: DETERMINATION TEAM

The verification team consists of the following personnel:

Mr. Ashok Mammen

Bureau Veritas Certification, Internal Technical Reviewer

Bureau Veritas Certification Internal reviewer

Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier for GHG projects. He has been involved in the validation and verification processes of more than 60 CDM/JI and other GHG projects.

Mr. Tomas Paulaitis

Bureau Veritas Certification Team leader, Climate Change Lead Verifier

Tomas Paulaitis is a lead auditor for the environment and quality management systems with over 10 years of experience and a lead GHG verifier (EU ETS, JI) with over 5 years of experience in energy, oil refinery and cement industry sectors, he was/is involved in the determination/verification of more than 15 JI projects. Tomas Paulaitis holds a Master's degree in chemical engineering.

Mr. Gediminas Vaškėla

Finance specialist

Gediminas Vaskela is a certified auditor with over 8 years of experience in auditing, due-diligence, reorganisation, special review and other assurance projects. He was/is involved in the determination/verification of 6 JI projects financial investment analysis.



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Bureau Veritas Certification Team member, financial specialist

Kęstutis Navickas, Associate Professor, Dr.

Bureau Veritas Certification, Technical specialist

Kęstutis Navickas is Head of the Lithuanian Academy of Agriculture department of Agroenergetics. He has more 14 years of experience with the research and development in the renewable energy and bioenergy sectors (more than 10 projects).