



DETERMINATION REPORT DOLOMITAS, AB

DETERMINATION OF THE PAKRUOJO WIND POWER PARK PROJECT

REPORT No. LITHUANIA-DET/0012/2010

REVISION No. 04

BUREAU VERITAS CERTIFICATION



DETERMINATION REPORT

Date of first issue: 31/08/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Dolomitas, AB	Client ref.: Vincas Ponelis, project manager

Summary:
Bureau Veritas Certification has made the determination of the “Pakruojis wind power park project” of Dolomitas, AB located in Akmenelio village, Pakruojis district, Lithuania on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Executive Board, as well as the host country criteria.

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

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

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

Report No.: LITHUANIA-DET/0012/2010	Subject Group: JI	
Project title: Pakruojis wind power park project		
Work carried out by: Team Leader: Tomas Paulaitis Team Member, Financial specialist: Gediminas Vaskela		
Work verified by: Internal technical reviewer: Leonid Yaskin		
Work approved by: Operational Manager: Witold Dżugan		
Date of this revision: 17/01/2011	Rev. No.: 04	Number of pages: 70

Indexing terms

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

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Abbreviations change

AB	Stock company
AVIR	Average Value of the Interest Rate
BASREC	Baltic sea region energy co-operation
CL	Clarification Request
CO ₂	Carbon Dioxide
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
LB	The central bank of the Republic of Lithuania
NAP	National Allocation Plan
UNFCCC	United Nations Framework Convention for Climate Change

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Appendix A: Determination Protocol

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1 INTRODUCTION

Dolomitas, AB has commissioned Bureau Veritas Certification to determine its JI project “Pakruojis wind power park project” (hereafter called “the project”) located in Akmenelio village, Pakruojis district, Lithuania.

This report summarizes the findings of the determination of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Executive Board, 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 Pakruojis wind power park 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 6,0MW (2MW x 3). The Pakruojis wind power park project 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 project will generate about 16,5 GWh of electric power per year. Such wind park's generation will lead to 10320 tCO₂/year emission reductions on the 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 Vaskela
Bureau Veritas Certification Team member, financial specialist

Internal technical review was carried out by:
Leonid Yaskin
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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Determination Protocol Table 1: Mandatory Requirements

Requirement	Reference	Conclusion	Cross reference
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 (OK), or a Corrective Action Request (CAR) or a Clarification Request (CL) 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.

Determination Protocol Table 2: Requirements checklist

Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
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 (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question is issued. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 3: Baseline and Monitoring Methodologies

Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
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 (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question is issued. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 4: Legal requirements



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Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
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 Corrective Action Request (CAR) due to non-compliance with the checklist question is issued. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 2/3	Summary of project owner response	Determination conclusion
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 first PDD (version 01) and additional background documents were submitted to Bureau Veritas Certification on June 2010.

To address Bureau Veritas Certification corrective action and clarification requests Dolomitas, AB revised the PDD (version 03) and resubmitted it on July 2010. Latest version 04 submitted on September 2010.

The determination findings presented in this report relate to the project as described in the PDD version 04.

2.2 Follow-up Interviews

On 21/06/2010 Bureau Veritas Certification performed interviews with representatives of Dolomitas, AB to confirm selected information and to resolve issues identified in the document review.

The main topics of these interviews are summarized in Table 1.



Table 1 Interview topics

Interviewed organization	Interview topics
Dolomitas, AB	➤ 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 fulfilment 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 11 Corrective Action Requests and 13 Clarification Requests.
- 3) The conclusions for determination subject are presented.

3.1 Project Design

3.1.1 Findings

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 Vėjo technologijų projektai, UAB. The project will generate about 16,5 GWh of electric power per year.

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) No.(10-7)-D8-9633 was issued on 06/11/2009.

The letter of approval was not issued on the time of draft determination report issuance (31 August 2010), therefore CAR 1 is issued. 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 26/10/2010 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 first monitoring report verification.

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

The detailed plan with the permission to build wind power plants and connection to the grid were issued by Pakruojis municipality on 24/09/2009. At the moment of the on-site visit (21/06/2010) roads had already been built and the construction of power substation and foundations had already been started. Start-up work and commissioning are planned in October 2010.

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.

3.1.2 Issued CARs/CRs

CAR 1 and CL's 1-5 were issued, the related information is documented in more detail in the determination protocol in Appendix A.

3.1.3 Conclusion

Bureau Veritas confirms that:

- CAR and CL's 1-5 have been resolved efficiently.

Hence the PDD (version 04) is in conformity with requirements to the project design.

3.2 Baseline and Additionality

3.2.1 Findings

Approved CDM ACM0002 methodology is not used for the baseline calculation due to the following reasons:

- 1) Lietuvos Elektrine, power plant with the second largest installed capacity in Lithuania (after Ignalina nuclear power plant –INPP) 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 emission factor.
- 2) 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 emission factor.
- 3) The country's baseline scenario and baseline emission factor for JI products 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 the Lithuanian baseline emission factor for JI energy generation projects is 0,626 tCO₂/MWh.

The additionality of the Pakruojo wind power park 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.

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 analysis has proved that project IRR is lower than the benchmark value. The sensitivity analysis confirms the fact that the project is financially not attractive enough. The common practise analysis also indicates that all wind energy parks are covered under JI scheme.

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Hence, the project activity is considered additional.

3.2.2 Issued CARs/CRs

CAR's 2-6 and CL's 6-10 were issued. The related information is documented in more detail in the determination protocol in Appendix A.

3.2.3 Conclusion

Bureau Veritas confirms that:

- All CARs and CL's have been resolved efficiently;
- The PDD (version 04) is in conformity with the requirements to the baseline and additionality.

3.3 Monitoring Plan

3.3.1 Findings

Monitoring activities are described in the PDD, section D and Annex 3. 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.

3.3.2 Issued CARs/CRs

None. The related information is documented in more detail in the determination protocol in Appendix A.

3.3.3 Conclusion

Bureau Veritas confirms that the PDD version 04 is in conformity with the requirements to the monitoring plan.

3.4 Calculation of GHG Emissions

3.4.1 Findings

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:

$$BE = E_{VP} \times EF_{LE}$$

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Where,

BE = Baseline emissions in year x (tCO₂);

E_{VP} = Net Electricity supplied to the grid by the project during period X (MWh);

EF_{LE} = Emission factor of the power plants based on fossil fuel (0,626 tCO₂/MWh);

Calculation of EFLE is presented in B1 and monitoring in D.4.

E_{VP} = E_{sup} - E_{con}

Where:

E_{sup} = Electricity supplied to the grid by the project during period X (MWh);

E_{con} = Electricity consumed from the grid by the project during period X (MWh).

Considered baseline emissions for period 2010-2012 are 23221 tCO₂.

3.4.2 Issued CARs/CRs

None. The related information is documented in more detail in the determination protocol in Appendix A.

3.4.3 Conclusion

Bureau Veritas confirms that the PDD version 04 is in conformity with the requirements to the calculation of GHG emissions.

3.5 Environmental Impacts

3.5.1 Findings

According to the Communications No.118 of Siauliai Regional Department of Environment of the Lithuanian Ministry of Environment of 03 December 2008, the environmental impact assessment (EIA) of the planned economic activity is not required.

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

3.5.2 Issued CARs/CRs

None. The related information is documented in more detail in the determination protocol in Appendix A.

3.5.3 Conclusion

Bureau Veritas confirms that the PDD (version 04) and the Project are in conformity with the requirements to the analysis of environmental impacts.

3.6 Comments by Local Stakeholders

3.6.1 Findings

In the detailed plan preparation compulsory public consideration procedures were undertaken with possible participation of all stakeholders. Stakeholders have expressed two proposals regarding lands easement establishment. Proposals were accepted and amendments on detailed plan were performed. Project detailed plan finally was approved on 24/09/2009.

3.6.2 Issued CARs/CRs

None.

3.6.3 Conclusion

Bureau Veritas confirms that the PDD (version 04) and the Project are in conformity with the requirements to stakeholder process.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the IAE shall make the project design document publicly available 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 09/06/2010 and invited comments within 08/07/2010 by Parties, stakeholders and UNFCCC accredited observers.

No comments were received.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the “Pakruojo wind power project” 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 and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

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

By building a wind farm the project is likely to result in reductions of GHG emissions. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 04) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfilment 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 Dolomitas, AB.

- /1/ Project Design Document, version 01, 27 October 2009
- /2/ Project Design Document, version 03, 07 May 2010
- /3/ Project Design Document, version 04, 14 September 2010
- /4/ Excel spread sheet for financial IRR calculation, version 4, 04/06/2010
- /5/ Excel spread sheet for financial IRR calculation, version 6, 22/07/2010

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 Vejo technologiju projektai, UAB, 2009
- /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 No. LP-0198, issued on 19/12/2008
- /4/ Detailed plan on wind park, issued by Pakruojis municipality on 24/09/2009
- /5/ Constructional permit No.11 on substation reconstruction, issued on 26/02/2010
- /6/ Constructional permit No. 21 on wind turbines erection, issued on 17/03/2010
- /7/ Communications No.118 of Siauliai Regional Department of Environment of the Lithuanian Ministry of Environment on 03 December 2008
- /8/ The letter of Endorsement (LoE) No.(10-7)-D8-9633 issued by the Lithuanian Ministry of Environment on 06/11/2009
- /9/ The letter of Approval issued by Lithuania Ministry of Environment on 26/10/2010 by the Communication No (10-2)-D8-10010 of the Ministry of Environment of the Republic of Lithuania

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/ Endas Deinoravicius, development director, Dolomitas, AB
- /2/ Vincas Ponelis, project manager, Dolomitas, AB

APPENDIX A: PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Projects

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved. At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines.	Kyoto Protocol Article 6.1 (a)	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) No.(10-7)-D8-9633 was issued on 06/11/2009. The Letter of Approval was issued on 26/10/2010.	Table 2, Section A.5
2. 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
3. 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.	
4. 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.	
5. 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,	Lithuania has indicated the designated national focal	



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	JI Modalities, §20	point and published national JI guidelines on JI website. The Ministry of Environment is the designate national focal point for Lithuania.	
6. 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.	
7. 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.	
8. 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).	
9. 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 May 2010.	
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments	Marrakech Accords, JI Modalities, §32	PDD (Version 01) was published on UNFCCC website on 09 June 2010.	



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
11. 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 Communications No.118 of Siauliai Regional Department of Environment of the Lithuanian Ministry of Environment of 03 December 2008, the environmental impact assessment (EIA) of the planned economic activity is not required.	Table 2, Section F
12. 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 absence of the proposed project.	Table 2, Section B
13. 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
14. 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, Appendix B	There are no requests to earn such ERUs in the baseline methodology.	Table 2, Section B
15. 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



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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
16. 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 01	Dolomitas, AB is a legal entity and has not been authorized by the Lithuanian DFP yet, see Table 2.	Table 2, Section A

TABLE 2 REQUIREMENTS CHECKLIST

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1 Title of the project					
A.1.1. Is the title of the project presented?		DR	The title "Pakruojo wind power park project" 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, and the latest version 04).	O.K.	O.K.
A.1.3. Is the date when the document was completed presented?		DR	The PDD Version 01 was completed on 27 October 2009. The PDD Version 04 was completed on 14/09/2010.	O.K.	O.K.
A.2. Description of the project					
A.2.1. Is the purpose of the project included?		DR I	The description of the project activity is presented in a clear and transparent manner, by explaining how greenhouse gas emissions will be reduced. It is foreseen to install 3 wind power plants with the total capacity of 6,0MW (2MW x 3). It is stated in the PDD, that in a conservative approach the project will generate about 16,5 GWh of electric power per year.	O.K.	O.K.



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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	The project will reduce greenhouse gas emissions by partially substituting electricity production in other power plants of Lithuania that run on fossil fuel.	O.K.	O.K.
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?		DR	All relevant project participants are listed in the PDD Table 1 (Dolomitas, AB)	O.K.	O.K.
A.3.2. Are project participants authorized by a Party involved?		DR	The project participant has not been authorized by a Party(ies) yet, see CAR1 below.	CAR1	O.K.
A.3.3. The data of the project participants are presented in tabular format?		DR	All the data of the project participants are presented.	O.K.	O.K.
A.3.4. Is contact information provided in annex 1 of the PDD?		DR	Contact information is provided.	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 is Lithuania, it is not considered as a project participant.	O.K.	O.K.
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)		DR	Lithuania is indicated as a host party.	O.K.	O.K.
A.4.1.2. Region/State/Province etc.		DR	Yes.	O.K.	O.K.



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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 referenced in the PDD section A.4.1.4.	CL1	O.K.
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
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.
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 wind turbines will be manufactured, installed, adjusted and set into action by Enercon GmbH staff. After the wind park's commissioning it is planned to sign a long-term agreement on the turbines' maintenance.	O.K.	O.K.
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?		DR	<u>Clarification action request:</u> Please, provide provisions for meeting training needs.	CL2	O.K.
A.4.3. Brief explanation of how the anthropogenic					



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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	<p>The renewable electricity produced by the wind power plants would displace carbon intensive electricity produced from fossil fuel sources in the Lithuanian power network.</p> <p><u>Clarification action request:</u> Please, provide references to national legislation mentioned in the PDD section A.4.4.</p>	CL3	O.K.
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?		DR	<p>The estimation of emission reductions is provided over all the crediting period.</p> <p><u>Clarification action request:</u> According to Vėjo technologiju projektai, UAB calculations the Pakruojo wind power park Project should generate about 16,5 GWh of electric power per year. Please, explain the high level of the capacity factor (31,4 %) comparing with already installed E-82 type turbines in Sudenai and Lendimai wind power park (the estimated capacity factor is 23,6 %), see Table below. The data on Sudenai and Lendimai wind power park are</p>	CL4	O.K.



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Fina I Con cl																												
			<p>publicly available on UNFCCC and LITGRID websites:</p> <table border="1" data-bbox="1178 586 1715 1109"> <thead> <tr> <th data-bbox="1178 586 1341 643">Wind power park</th> <th data-bbox="1341 586 1482 643">Pakruojas</th> <th colspan="2" data-bbox="1482 586 1715 643">Sudėnai and Lendimai</th> </tr> </thead> <tbody> <tr> <td data-bbox="1178 643 1341 732">Type of wind power turbine</td> <td data-bbox="1341 643 1482 732">3x2 MW, E-82</td> <td colspan="2" data-bbox="1482 643 1715 732">7x2 MW, E-82</td> </tr> <tr> <td data-bbox="1178 732 1341 789"></td> <td data-bbox="1341 732 1482 789">Estimation</td> <td data-bbox="1482 732 1602 789">Estimation</td> <td data-bbox="1602 732 1715 789">Year 2009 data</td> </tr> <tr> <td data-bbox="1178 789 1341 886">Power generation, MWh</td> <td data-bbox="1341 789 1482 886">16486</td> <td data-bbox="1482 789 1602 886">28990</td> <td data-bbox="1602 789 1715 886">27688</td> </tr> <tr> <td data-bbox="1178 886 1341 1008">Nominal power generation, MWh (capacity, kw * 8760 hours)</td> <td data-bbox="1341 886 1482 1008">52560</td> <td data-bbox="1482 886 1602 1008">122640</td> <td data-bbox="1602 886 1715 1008">122640</td> </tr> <tr> <td data-bbox="1178 1008 1341 1057">Capacity factor, %</td> <td data-bbox="1341 1008 1482 1057">31,4</td> <td data-bbox="1482 1008 1602 1057">23,6</td> <td data-bbox="1602 1008 1715 1057">22,6</td> </tr> <tr> <td data-bbox="1178 1057 1341 1109">MWh/2MW turbine</td> <td data-bbox="1341 1057 1482 1109">5495</td> <td data-bbox="1482 1057 1602 1109">4141</td> <td data-bbox="1602 1057 1715 1109">3955</td> </tr> </tbody> </table>	Wind power park	Pakruojas	Sudėnai and Lendimai		Type of wind power turbine	3x2 MW, E-82	7x2 MW, E-82			Estimation	Estimation	Year 2009 data	Power generation, MWh	16486	28990	27688	Nominal power generation, MWh (capacity, kw * 8760 hours)	52560	122640	122640	Capacity factor, %	31,4	23,6	22,6	MWh/2MW turbine	5495	4141	3955		
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MWh/2MW turbine	5495	4141	3955																														
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO ₂ e?		DR	The estimated annual reduction is provided in the PDD section Table 6, the PDD section A.4.4.1.	O.K.	O.K.																												
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above		DR	Yes, the data are provided in the PDD	O.K.	O.K.																												



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presented in tabular format?			section Table 6, the PDD section A.4.4.1.		
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?		DR	<p>The letter of Endorsement No.(10-7)-D8-9633 was issued on 06.11.2009. Written project approvals are not attached. The approval has not been issued yet, according to 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.</p> <p>The approval from the investor country will be compulsory at the latest when the first verification report is publicised.</p> <p><u>Corrective action request:</u> The approval letter from the Lithuanian DFP should be submitted.</p>	CAR1	O.K.
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?		DR	The chosen baseline is described in detail.	O.K.	O.K.



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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 same baseline was chosen in the similar PDD of the "Liepyne Wind Power Park Joint Implementation Project" (Reg. No. 0178).	O.K.	O.K.
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.
B.1.5. Is all literature and sources clearly referenced?		DR	All data sources are clearly referenced (PDD section B1 Table). <u>Clarification action request:</u> Please, make references for the PDD section B1 Table statement "Presented emission factor is used for all known Lithuanian JI projects".	CL5	O.K.
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					



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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 below	O.K.
1. Additionality of a project activity					
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 additionality (version 05.2)" was used.	O.K.	O.K.
b. Has the tool used the following steps to assess additionality 1. Identification of alternatives to the project activity 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 3. Barriers analysis; and 4. Common practice analysis.	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 1. Sub-step 1a: Define alternatives to the project activity 2. Sub-step 1b: Consistency with mandatory laws and regulations	Ver 05.2	DR	Alternatives to the project activity have been defined: Alternative A - the proposed project activity not undertaken as JI project activity; Alternative B - the electric power in the	O.K.	O.K.



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			Lithuanian network will be produced by new modern cogeneration power plants. Both alternatives are in compliance with mandatory legislation and regulations.		
<p>d. Have the following alternatives been included while defining alternatives as per sub-step 1a</p> <ol style="list-style-type: none"> 1. (a) The proposed project activity undertaken without being registered as a JI project activity 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 3. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken). 	Ver 05.2	DR	See the row above. Continuation of the current situation is not applicable, because it is a "green field" project.	O.K.	O.K.
<p>e. Has the project participant included the technologies or 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.</p>	Ver 05.2	DR	The proposed project activity not undertaken as a JI project activity provides the same outputs as the proposed JI activity.	O.K.	O.K.
<p>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.</p>	Ver 05.2	DR	See e) above.	O.K.	O.K.
<p>g. Is the alternative(s) in compliance with all mandatory</p>	Ver	DR	Both alternatives are in compliance with	O.K.	O.K.



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applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.	05.2		mandatory legislation and regulations.		
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	Both alternatives are in compliance with mandatory legislation and regulations.	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 has been selected.	O.K.	O.K.
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	Ver 05.2	DR	Step 2 has all the sub-steps for investment comparison analysis (Option III). <u>Corrective action request:</u> Please, correct the typing error “Sub-step 2b. – Option <u>II</u> . Apply Benchmark analysis“ in the PDD page 13.	CAR 2	O.K.



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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):					
i. 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 (benchmark analysis) 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 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	Ver 05.2	DR	IRR (Internal rate of return) is used.	O.K.	O.K.



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<p>o. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis</p> <ol style="list-style-type: none"> 1. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context. 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. 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 required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on 	<p>Ver 05.2</p>	<p>DR</p>	<p>For Sub-step 2b the below provided guideline was followed, it means benchmark analysis was applied:</p> <ol style="list-style-type: none"> 1. The financial/economic indicator (IRR), most suitable for the project type and decision context was identified. 2. The financial/economic analysis is 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. 3. In order to apply a benchmark comparable to the project IRR the project developer selected to use the average value of the interest rate (AVIR) on loans for non-financial corporations published by the central bank of Lithuania. AVIR is the benchmark interest rate at which Lithuanian commercial banks and other financial institutions lend money to their customers. 	<p>O.K.</p>	<p>O.K.</p>



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<p>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>The selected benchmark data is publicly available and acceptable for this type of project comparing with the project IRR.</p>		
<p>p. 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 investors if this is standard practice for the selection</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 in the IRR calculation for the proposed JI project activity except for other expenses.</p> <p><u>Clarification action request :</u> Please, clarify why “other expenses” were not included in the IRR calculation.</p>	CL6	O.K.



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<p>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>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>Clarification action request :</u> Please, clarify what costs were included in the "operation expenses" and why they are growing starting with 2015.</p> <p>2. The investment analysis is presented in separate annexes of JI-PDD.</p> <p>3. <u>Clarification action request:</u> Please, highlight all assumptions in a separate sheet (annex) and justify clearly (preferable with suitable documentation): -project long-term activity assets (Project assets) purchase price (purchase contracts with Enercon GmbH, UAB "Liumenas"); -applied interest rate (agreements with banks); - calculations of operation expenses; - reasons for the change of operating expenses during the period of project lifetime; - for clarification purposes, please, add the Project balance sheets and income statements to the investment analysis; - clarify, which input data should be</p>	<p>CL7</p> <p>O.K.</p> <p>CL8</p>	<p>O.K.</p> <p>O.K.</p> <p>O.K.</p>



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			<p>changed, to get the information based on sensitivity analysis.</p> <p>4. No project risks were included in the IRR calculation.</p> <p>5. The same assumptions and input data were used doing the investment analysis. <u>(Will be revised additionally, after CAR's and CL's corrections).</u></p> <p>6. IRR comparison for the proposed activity is presented in JI-PDD.</p>	<p>O.K.</p> <p>O.K.</p> <p>O.K.</p>	<p>O.K.</p> <p>O.K.</p> <p>O.K.</p>
<p>q. 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>	<p>Ver 05.2</p>	<p>DR</p>	<p>According to the Tool for the Demonstration and Assessment of Additionality, v.05.2, the minimal variation range should be in $\pm 10\%$ level. The PDD figure 4 shows that the Project IRR becomes higher than the benchmark IRR when total investments drop by 10% or the energy output increases by 10%. <u>Will be revised additionally, after CAR's and</u></p>		<p>O.K.</p>



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			<u>CL's corrections</u>).		
r. Has the outcome of Step 2 clearly mentioned with justification?	Ver 05.2	DR	It is stated that the project is financially not attractive enough and revenues from ERUs sale give the chance to improve its financial figures. <u>Will be revised additionally, after CAR's and CL's corrections</u>).		O.K.
s. 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	Barrier analysis is not used, because after the sensivity analysis it was concluded that the proposed activity is not financially attractive enough.	O.K.	O.K.
t. 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	Ver 05.2	DR	Barrier analysis is not used.	O.K.	O.K.



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<p>origin.</p> <p>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 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>u. Has the outcome from Step 3a clearly mentioned in PDD?</p>	Ver 05.2	DR	Barrier analysis is not used.	O.K.	O.K.
<p>v. 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</p>	Ver 05.2	DR	Barrier analysis is not used.	O.K.	O.K.



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<p>the proposed project activity):</p> <ol style="list-style-type: none"> 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. 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. 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. 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 					



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<p>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>					
w. Has the outcome from Step 3 clearly mentioned in PDD?	Ver 05.2	DR	Barrier analysis is not used.	O.K.	O.K.
<p>x. In step 4: Common practise analysis have all the sub-steps as below followed?</p> <p>1. Sub-step 4a: Analyze other activities similar to the proposed project activity</p> <p>2. Sub-step 4b: Discuss any similar Options that are occurring</p>	Ver 05.2	DR	Step 4 has all the sub-steps (sub-step 4a and sub-step 4b).	O.K.	O.K.
<p>y. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity</p> <p>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.</p>	Ver 05.2	DR	Other wind parks in Lithuania are analysed. The information is provided, that there are no similar projects (other JI project activities are not included). All larger scale wind power parks in Lithuania are developed as JI projects.	O.K.	O.K.
z. Has the below guideline followed for Sub-step 4b:	Ver	DR	See the row above, there are no similar	O.K.	O.K.



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<p>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 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.</p>	05.2		wind power projects in Lithuania.		
aa. Has the outcome from Step 4 clearly mentioned in PDD?	Ver 05.2	DR	Clarification action request: Please, argue or clarify the statement “The fact that during the last two years no more wind parks were erected proves the fact that wind energy Projects aren’t financially attractive and face different barriers”.	CL 9	O.K.
bb. Has it been proved that the project is additional?	Ver 05.2	DR	Additionality will be proved after the resolution of the corrective action request above.		O.K.
2. Investment Analysis					



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
a. Is the period of assessment limited to the proposed crediting period of the JI project activity.	EB 41	Annex 45	The period of assessment is not limited to the proposed crediting period. The project started in 2009, but the project activity started and the first income was earned in 2010. The period of assessment is 2009-2029 comparing to the crediting period of October 2010 – December 2012.	O.K.	O.K.
b. Does 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	Annex 45	The project IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime).	O.K.	O.K.
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	Annex 45	The “other expenses” are not included in the IRR calculation. <u>Corrective action request :</u> The “other expenses” should be included into the calculation of IRR.	CAR 3	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	Annex 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	EB 41	Annex	The fair value of the project activity assets was not included as a cash flow in the final	O.K.	O.K.



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period?		45	year because at the end of the project lifetime period (i.e. 2030) the fixed assets of the company shall amount to 0 LTL and the old turbines as well as foundations will be dismantled for their residue values.		
f. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice.	EB 41	Ann ex 45	See section e above.	O.K.	O.K.
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, but <u>Correction action request:</u> The project long-term assets should be depreciated during the project technical lifetime (20 years), not based on country norms.	CAR 4	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	Taxes have been included as expenses in the IRR calculation, but <u>Corrective action request:</u> The formula of corporate tax calculation was written incorrectly for the year 2011.	CAR 5	O.K.
j. Are the input values used in all investment analysis valid	EB	Ann	<u>Clarification action request:</u>	CL 10	O.K.



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and applicable at the time of the investment decision taken by the project participant?	41	ex 45	Please, indicate the time of the investment decision taken.		
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 CL 10 above.	CL 10	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 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?	EB 41	Ann ex 45	To avoid the opportunity of the project 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.	O.K.	O.K.
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 the spreadsheet are readable; all cells are viewable and unprotected.	O.K.	O.K.
p. In cases where the project participant does not wish to	EB	Ann	The spreadsheet will be provided on the	O.K.	O.K.



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make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	41	ex 45	UNFCCC internet page.		
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. Is 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 been considered as the net cash outflow?	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
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	The applied benchmark is appropriate to the type of IRR calculated.	O.K.	O.K.
v. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 41	Ann ex 45	AVIR is selected as an appropriate benchmark for the project IRR.	O.K.	O.K.
w. Has required/expected returns on equity 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.



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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	The applied benchmark is based on publicly available data sources which can be clearly validated. The link is provided in JI-PDD.	O.K.	O.K.
z. Does 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 the country/region.	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.
bb. Is 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	EB 41	Ann ex 45	Not applicable.	O.K.	O.K.



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market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)					
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 total investment, energy output and ERUs price were chosen as variables, which possibly constitute more than 20% of the total project revenue and/or costs. The results of the variations have been presented in the sensitivity analysis.	O.K.	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	Assumptions were indicated clearly and it was noted that currently there is no information on the assumptions that may arise and have a significant impact on the project profitability.	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.
ii. 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 +20% and -20%.	O.K.	O.K.



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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	Annex 45	An assessment 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 was done.	O.K.	O.K.
			<p><u>Corrective action request:</u> File "Ekonominis_modelis_Dolom4" Sheet "IRR"</p> <ul style="list-style-type: none"> - Amount, provided in cell W37 should be deleted; - Values in cells W36 and V37 should be equal. Please, find mistakes and correct them. - All values in row 35 should match values in row 47. Please, find mistakes and correct them. - Recalculation of depreciation as mentioned in CAR's before. 	CAR 6	O.K.
B.2.2. Is the baseline scenario described?		DR	The baseline scenario is described in the PDD Section A.2.	O.K.	O.K.
B.2.3. Is the project scenario described?		DR	The baseline scenario is described in the PDD Section A.2.	O.K.	O.K.
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions		DR	The analysis is presented in the PDD Section B.1.	O.K.	O.K.



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in the project scenario included?					
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?		DR	It is clearly demonstrated in the PDD Section A.2.	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 PP Section B2, sub-step 1b.	O.K.	O.K.
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?		DR	Spatial boundaries comply with the statements in the PDD.	O.K.	O.K.
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.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?		DR	The date of the baseline setting: May 2010. <u>Corrective action request:</u> please, provide date of the baseline setting in DD/MM/YYYY format.	CAR 7	O.K.
B.4.2. Is the contact information provided?		DR	The contact information is provided in Table 17.	O.K.	O.K.
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	The person/entity is also a project participant listed in Annex 1.	O.K.	O.K.
C. Duration of the small-scale project and crediting period					
C.1. Starting date of the project					



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C.1.1. Is the project's starting date clearly defined?		DR	<u>Corrective action request:</u> JI guidelines requirement is: "The starting date of a JI project is the date on which the implementation or construction or real action of the project begins." Please, indicate the starting date as above and describe which action has been started on this date.	CAR 8	O.K.
C.2. Expected operational lifetime of the project					
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.
C.3. Length of the crediting period					
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 3 months– lasting from 01 October 2010 to December 31, 2012.	O.K.	O.K.
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
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	No project emissions are expected. A formula required to estimate the baseline scenario is defined.	O.K.	O.K.



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D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.		DR	No project emissions are expected.	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	No project emissions are expected.	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	<p>PDD section D.2 states, that “Additional power metering device will be installed on back up line – to be able to control power consumption for own purposes from low voltage grid (0,4kV). VST will carry out periodical supervision, calibration and maintenance of height and low voltage metering devices. “</p> <p><u>Corrective action request:</u> During the on-site audit the information was received that there are no plans to implement that back-up line. Please, correct the PDD sections D.2 and D.4 accordingly.</p> <p><u>Corrective action request:</u> The requirement for data retention time is at least 2 years after the end of crediting period. Please, correct the PDD section D.2 accordingly.</p>	<p>CAR 9</p> <p>CAR 10</p>	<p>O.K.</p> <p>O.K.</p>



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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.
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	<u>Clarification action request:</u> Please, argue why the project emissions are considered to be 0, taking into account the wind power park power consumption.	CL 11	O.K.
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?		DR, I	Compulsory measurements of the noise level are planned.	O.K.	O.K.



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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.
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?		DR	QA/QC procedures are provided in the PDD section D.2 and D.3.	O.K.	O.K.
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
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.4.	O.K.	O.K.
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
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.
E. Estimation of greenhouse gases emission reductions					



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E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due the project?		DR	No project emissions are expected, therefore section E.1.1 is not applicable.	O.K.	O.K.
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.
E.2. Estimated leakage					
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.
E.3. The sum of E.1 and E.2.					
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.
E.4. Estimated baseline emissions					
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		DR	Not applicable.	O.K.	O.K.



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applicable project category?					
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	<p>$BE = E_{VP} \times EF_{LE}$</p> <p>Where, BE = Baseline emissions in year x (tCO₂) E_{VP} = Net Electricity supplied to the grid by the project during period X (MWh) EF_{LE} = Emission factor of the power plants based on fossil fuel (0,626 tCO₂/MWh).</p> <p><u>Clarification action request:</u> Please, provide a formula to calculate EVP.</p> <p><u>Corrective action request:</u> Please, correct the statement in the PDD section E.4 "Calculation of EF_{LE} is presented in B1 and monitoring in D.1.1.4.", because there is no section D.1.1.4.</p>	CL 12 CAR 11	O.K. O.K.
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?		DR	Not applicable.	O.K.	O.K.
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
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.
E.6. Table providing values obtained when applying					
				O.K.	O.K.



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formulae above					
E.6.1. Is there a table providing values of total CO2 abated?		DR	Yes.	O.K.	O.K.
F. Environmental Impacts					
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					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?		DR, I	The relevant environmental impacts are sufficiently described in the PDD. An environmental impact investment 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 identified environmental impacts been addressed in the project design?		DR, I	<u>Clarification action request:</u> Please, provide information how shadowing control and	CL 13	O.K.



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			noise reduction measures, required by the detailed plan, will be implemented. Please, amend the PDD section F.1 accordingly.		
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?		DR	Two comments have been received during the implementation of compulsory public consideration procedures. Stakeholders have expressed two proposals regarding lands easement establishment. Proposals were accepted and amendments on detailed plan were performed.	O.K.	O.K.
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
1. Baseline Methodology					
1.1. General					
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 electricity production 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.
1.2. Additionality					
1.2.1. Was the additionality of the project activity demonstrated and assessed?		DR			



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2. Monitoring Methodology					
2.1. Monitoring plan					
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.



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1.7. Does the monitoring plan provide for quality assurance and control procedures for the monitoring process?		DR	The monitoring plan provides quality assurance and control procedures. Also see D.1.5 above.	O.K.	O.K.
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.
2.2. Quality Control (QC) and Quality Assurance (QA) Procedures					
2.2.1. Did all measurements use calibrated measurement equipment that is regularly checked for its functioning?		DR	Yes. Also see D.1.5 above.	O.K.	O.K.
1. 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
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?		DR, I	According to the Communications No.118 of Siauliai Regional Department of Environment of the Lithuanian Ministry of Environment of 03 December 2008, the environmental impact assessment (EIA) of the planned economic activity is not required.	O.K.	O.K.
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	The detailed plan, approved by Pakruojis municipality on 24 September 2009, states that the project activity will not have a negative environmental impact if all applicable legal requirements are implemented.	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
CAR 1: The approval letter from the Lithuanian DFP should be submitted.		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 20/10/2010 was found acceptable to close CAR1. The approval from the investor country will be compulsory for first monitoring report verification. Hence, CAR1 is closed.
CAR 2: Please, correct the typing error “Sub-step 2b. – Option II. Apply Benchmark analysis“ in the PDD page 13.	Table 2, Additionality of a project activity, k)	The typing error is corrected in the PDD (Version 04).	The revised PDD (version 04) was reviewed and found acceptable. Hence, CAR 2 is closed.
CAR 3: The “other expenses” should be included into the calculation of IRR.	Table 2, Investment analysis, c)	Other expenses were included into the project IRR calculations.	The revised IRR calculation (version 6) was reviewed and found acceptable. Hence CAR 3 is closed.
CAR 4: Project long-term assets should be depreciated during project technical lifetime (20 years), not based on country norms.	Table 2, Investment analysis, h)	Depreciation time was adjusted from 15 to 20 years (as the project technical lifetime).	The revised IRR calculation (version 6) and the PDD (version 04) were reviewed and found acceptable. Hence CAR 4 is closed.



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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
CAR 5: The formula of corporate tax calculation was written incorrectly for the year 2011.	Table 2, Investment analysis, i)	The formula was corrected accordingly.	CAR 5 is closed.
CAR 6: File "Ekonominis_modelis_Dolom4" Sheet "IRR" <ul style="list-style-type: none"> - Amount provided in cell W37 should be deleted; - Values in cells W36 and V37 should be equal. Please, find mistakes and correct them. - All values in row 35 should match values in row 47. Please, find mistakes and correct them. - Recalculation of depreciation as mentioned in CAR's before. 	Table 2, Investment analysis	All mistakes are corrected accordingly.	The revised IRR calculation (version 6) was reviewed and found acceptable. Hence CAR 6 is closed.
CAR 7: Please, provide date of the baseline setting in DD/MM/YYYY format.	Table 2, B.4.1.	The date of the baseline setting is provided in DD/MM/YYYY format in the PDD (Version 04).	CAR 7 is closed.
CAR 8: JI guidelines requirement is: "The starting date of a JI project is the date on which the implementation or construction or real action of the project begins." Please, indicate the starting date as above and describe which action was started on this	Table 2, C.1.1.	The project was started on 29/10/2008 by winning the auction on connection to the national grid (Zone 1) organized by Lietuvos energija, AB. At the same time the project owner provided cash collateral as an up-front payment for the park's	CAR 8 is closed.



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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
date.		connection needs. This date is indicated as the project starting date in the PDD (Version 04).	
CAR 9: During the on-site audit the information was received that there were no plans to implement that back-up line. Please, correct the PDD sections D.2 and D.4 accordingly.	Table 2, D.1.5.	The PDD (Version 04) is corrected accordingly.	CAR 9 is closed.
CAR 10: The requirement for data retention time is at least 2 years after the end of the crediting period. Please, correct the PDD section D.2 accordingly.	Table 2, D.1.5.	The PDD (Version 04) is corrected accordingly (retention time at least 2 years after the end of the crediting period is defined).	CAR 10 is closed.
CAR 11: Please, correct the statement in the PDD section E.4 "Calculation of EFLE is presented in B1 and monitoring in D.1.1.4.", because there is no section D.1.1.4.	Table 2, E.4.2	The typing error is corrected in the PDD (Version 04).	CAR 11 is closed.
CL 1: Please, explain what kind of coordinates is referenced on the PDD section A.4.1.4.	Table 2, A.4.1.4	Necessary references to the detailed plan are made in the PDD (version 04).	The revised PDD (version 04) section A.4.1.4 was reviewed and found acceptable. Hence, CL 1 is closed.
CL 2: Please, provide provisions for meeting training needs.	Table 2, A.4.2.5	The PDD does not provide provisions for meeting training needs, because Dolomitas, AB does not have technical personnel. All operation work will be subcontracted to Enercon.	Explanation is found acceptable. Hence, CL 2 is closed.

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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						
<p>CL 3: Please, provide references to national legislation mentioned in the PDD section A.4.4.</p>	<p>Table 2, A.4.3.1</p>	<p>Necessary references to national legislation are made in the PDD (version 04): Law on Energy, No IX-884; Resolution on the promotion of electricity produced from renewable energy sources, No.1474; Resolution of the national price and energy control commission, No.03-27.</p>	<p>The revised PDD (version 04) section A.4.4 was reviewed and found acceptable. Hence, CL 3 is closed.</p>						
<p>CL 4: According to Vėjo technologiju projektai, UAB calculations the Pakruojis wind power park Project should generate about 16,5 GWh of electric power per year. Please, explain the high level of the capacity factor (31,4 %) comparing with already installed E-82 type turbines in Sudėnai and Lėdimai wind power park (the estimated capacity factor is 23,6 %), see Table below. Data on Sudėnai and Lėdimai wind power park are publicly available on UNFCCC and LITGRID websites:</p> <table border="1" data-bbox="191 1182 726 1328"> <thead> <tr> <th>Wind power park</th> <th>Pakruojis</th> <th>Sudėnai and Lėdimai</th> </tr> </thead> <tbody> <tr> <td>Type of wind power turbine</td> <td>3x2 MW, E-82</td> <td>7x2 MW, E-82</td> </tr> </tbody> </table>	Wind power park	Pakruojis	Sudėnai and Lėdimai	Type of wind power turbine	3x2 MW, E-82	7x2 MW, E-82	<p>Table 2, A.4.3.2</p>	<p>The energy output calculations were based on control measurements of wind parameters. Initial wind measurement results show that the average wind speed at 60 m height is 7,36 m/s. It is planned to install wind turbines whose hub height is 98m, therefore, wind parameters become even better at this height. A big impact on the project productivity has its terrain. The Pakruojis wind energy park is located on the open space and at the bottom of carriers hills, i.e. these places were not under operation for dolomite extraction, therefore, a big difference between the surrounding ground levels was formed. Moreover, each wind project is specific where different parameters have impact on its productivity (wind parameters,</p>	<p>The explanation is found acceptable taking into account these considerations:</p> <ol style="list-style-type: none"> 1) Physical aspects of the wind park location are unique for Lithuania 's practice indeed. 2) Estimation methods are still not standardized, therefore, different estimation methods can be used for different projects.
Wind power park	Pakruojis	Sudėnai and Lėdimai							
Type of wind power turbine	3x2 MW, E-82	7x2 MW, E-82							



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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
	Estimation	Estimation	Year 2009 data		terrain, technology, losses, technical availability).	
Power generation, MWh	16486	28990	27688			
Nominal power generation, MWh (capacity, kw * 8760 hours)	52560	122640	122640			
Capacity factor, %	1,4	23,6	22,6			
MW/2MW turbine	5495	4141	3955			
CL 5: Please, make references for the PDD section B1 Table statement "Presented emission factor is used for all known Lithuanian JI projects".				Table 2, B.1.5	References are provided as requested: UNFCCC webpage, JI Projects registration numbers: No.0025, No.0034, No.0163, No.0178, No.0200, No.0205.	The revised PDD (version 04) section B.1 was reviewed and found acceptable. Hence, CL 5 is closed.
CL 6: Please, clarify why "other expenses" were not included in the IRR calculation.				Table 2, Additionality of a project activity, p)	See response to CAR 3.	CL 6 is closed.
CL 7: Please, clarify what costs were included in the "operation expenses" and why they are growing starting with 2015.				Table 2, Additionality of a project activity, p)	A contract copy with Enercon is provided. It is stated there that O&M costs first 5 years – 0.006 Eur/kWh, after – 0.012 Eur/kWh.	CL 7 is closed.
CL 8: Please, highlight all assumptions in a				Table 2,	The required contracts are provided, which	CL 8 is closed.



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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
separate sheet (annex) and justify clearly (preferably with suitable documentation): -project long-term activity assets (Project assets) purchase price (purchase contracts with Enercon GmbH, UAB "Liumenas"); -applied interest rate (agreements with banks); - calculations of operation expenses; - reasons for the change of operating expenses during the period of project lifetime; - for clarification purposes, please, add the project balance sheets and income statements to the investment analysis; - clarify, which input data should be changed to get the information based on sensitivity analysis.	Additionality of a project activity, p)	confirm project long-term assets purchase price, applied interest rate, operation and maintenance expenses. The required clarifications are provided, too.	
CL 9: Please, argue or clarify the statement "The fact that during the last two years no more wind parks were erected proves the fact that wind energy Projects aren't financially attractive and face different barriers".	Table 2, Additionality of a project activity, aa)	The statement was deleted in the PDD (Version 04).	CL 9 is closed.
CL 10: Please, indicate the time of the investment decision taken.	Table 2, Investment analysis, j)	The Company Board minutes were presented, with the statement of the investment decision taken (December 2008).	CL 10 is closed.
CL 11: Please, argue why project emissions	Table 2,	The project monitoring plan evaluates net	CL 11 is closed.

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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
are considered to be 0, taking into account the wind power park power consumption.	D.1.12	power production to the national grid, i.e. the difference between produced and consumed power. It means power consumption emissions will be accounted and therefore project emissions are considered equal to zero. The PDD section E.1 is clarified accordingly.	
CL 12: Please, provide a formula to calculate E_{VP} .	Table 2, E.4.2	The formula to calculate E_{VP} is described in the PDD version 04, section E.4: $E_{VP} = E_{sup} - E_{con}$ Where: E_{sup} = Electricity supplied to the grid by the project during period X (MWh) E_{con} = Electricity consumed from the grid by the project during period X (MWh).	CL 12 is closed.
CL 13: Please, provide information how shadowing control and noise reduction measures, required by the detailed plan, will be implemented. Please, amend the PDD section F.1 accordingly.	Table 2, F.1.6	The shadowing effect will be reduced by a proper position of wind turbines. Moreover, the wind turbines will also have possibilities to stop automatically (temporary) the rotation of their blades when the shadow droops on the nearest living houses areas. It is estimated that the Pakruojis wind power park project noise level satisfies allowable values within 80m, therefore, no additional measures are needed to	CL 13 is closed.



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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
		mitigate this impact. The closest living area (grange) is 245m away from the wind power park area. The PDD (Version 04) section F.1 is amended accordingly.	

APPENDIX B: DETERMINATION TEAM

The verification team consists of the following personnel:

Mr. Leonid Yaskin, PhD (thermal engineering)

Internal Technical Reviewer.

Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Lead Verifier, Internal Technical Reviewer.

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krrzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He has performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 60 JI projects.

Mr. Tomas Paulaitis, M.Sci

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 10 JI projects. Tomas Paulaitis holds a Master's degree in chemical engineering.



DETERMINATION REPORT

Mr. Gediminas Vaskela
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 4 JI projects financial investment analysis.