



# VERIFICATION REPORT

## 4ENERGIA, UAB

### VERIFICATION OF THE

# SUDENAI AND LENDIMAI WIND POWER JOINT IMPLEMENTATION PROJECT

MONITORING PERIOD:  
01 JANUARY 2010 TO 31 DECEMBER 2010

**REPORT No. LITHUANIA-VER/0022/2011**  
REVISION No.02

BUREAU VERITAS CERTIFICATION



VERIFICATION REPORT

Date of first issue: 14/04/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: 4ENERGIA, UAB	Client ref.: Tadas Navickas, director

**Summary:**  
Bureau Veritas Certification has made the 2nd periodic verification of the JI Track II Project “Sudenai and Lendimai Wind Power Joint Implementation Project”, project of 4ENERGIA, UAB applying the project specific methodology on the basis of UNFCCC criteria for the JI as well as the criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions made by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during the defined verification period, and consisted of the following three phases: i) a desk review of the project design, baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in the approved project design documents. The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions or misstatements, and is total 16 779 tons of CO<sub>2</sub>eq for the monitoring period 01/01/2010-31/12/2010.

Our opinion relates to the project’s GHG emissions and resulting GHG emission reductions reported and to the approved project baseline and monitoring, and its associated documents.

Report No.: LITHUANIA-VER/0022/2011	Subject Group: JI	
Project title: Sudenai and Lendimai wind power park Joint implementation project		
Work carried out by: Tomas Paulaitis: Lead Verifier Kęstutis Navickas: Technical specialist		
Work reviewed by: Ashok Mammen Hristo Schwabski		
Work approved by: Witold Dzugan		
Date of this revision: 13/05/2011	Rev. No.: 02	Number of pages: 23

- No distribution without permission from the Client or responsible organizational unit
- Limited distribution
- Unrestricted distribution



<b>Table of Contents</b>		<b>Page</b>
1	INTRODUCTION.....	3
1.1	Objective	3
1.2	Scope	3
1.3	Verification Team	3
2	METHODOLOGY.....	4
2.1	Review of Documents	5
2.2	Follow-up Interviews	5
2.3	Resolution of Clarification, Corrective and Forward Action Requests	5
3	VERIFICATION CONCLUSIONS.....	6
3.1	Project approval by Parties involved (90-91)	6
3.2	Project implementation (92-93)	7
3.3	Compliance of the monitoring plan with the monitoring methodology (94-98)	7
3.4	Revision of the monitoring plan (99-100)	9
3.5	Data management (101)	9
3.6	Verification regarding programmes of activities (102-110)	10
4	VERIFICATION OPINION.....	11
5	REFERENCES.....	12
APPENDIX A: SUDENAI AND LENDIMAI WIND POWER PARK JOINT IMPLEMENTATION PROJECT VERIFICATION PROTOCOL.....		13



## 1 INTRODUCTION

4ENERGIA, UAB has commissioned Bureau Veritas Certification to verify the emission reductions of its “Sudenai and Lendimai wind power park joint implementation project” (hereafter called “the project”) near to the villages Sudenai and Lendimai, Kretingos county, Lithuania. This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as the criteria given to provide for consistent project operations, monitoring and reporting.

The order includes the second periodic verification of the project for the period 01/01/2010-31/12/2010.

### 1.1 Objective

Verification is a periodic independent review and ex post determination by an Accredited Independent Entity of the monitored reductions in GHG emissions during a defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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

### 1.2 Scope

The verification 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. The information in these documents is reviewed against the Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification 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 monitoring towards reductions in the GHG emissions.

### 1.3 Verification Team

The verification team consists of the following personnel:

Tomas Paulaitis, M.Sci. (chemical engineering)

Bureau Veritas Certification Team Leader, Climate Change Verifier

Tomas Paulaitis is a lead auditor for environment and quality management systems and a lead GHG verifier (EU ETS, JI) with over 5 years of experience and was/is involved in the determination/verification of more than 20 JI projects.



---

**VERIFICATION REPORT**

---

Kęstutis Navickas, Associate Professor, Dr.  
Bureau Veritas Certification, Technical specialist  
Kęstutis Navickas is Head of the Lithuanian Academy of Agriculture department of Agroenergetics. He has more than 14 years of experience with the research and development in the renewable energy and bioenergy sectors (more than 10 projects).

This verification report was reviewed by:

Ashok Mammen

Bureau Veritas Certification, Internal Technical Reviewer

Bureau Veritas Certification Internal reviewer

Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier and tutor for GHG projects. He has been involved in the validation and verification processes of more than 100 CDM/JI and other GHG projects.”

Hristo Schwabski, M.Sc. (thermal power engineering)

Bureau Veritas Certification Sofia, Greenhouse Gas Auditor.

Hristo Schwabski specializes in developing of JI projects and assessment of CDM/JI/VCS projects. He has over 8 years of experience in the sector of renewable energies GHG projects.

## **2 METHODOLOGY**

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

In order to ensure transparency, the verification protocol was customized for the project according to version 01.1 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, the criteria (requirements), means of verification and results from verifying the identified criteria. The verification protocol serves the following purposes:

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

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



## 2.1 Review of Documents

The Monitoring Report (MR) version 1.0 dated 21/02/2011 and Monitoring plan revision 1.0 dated 15/07/2010 submitted by 4ENERGIA, UAB and additional background documents related to the project design and baseline, i.e. the country Law, Project Design Document (PDD), Project Determination Report, Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on verification requirements to be checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the project as described in the PDD Version 8, dated 26/05/2009, the Monitoring Report version 1.0 dated 21/02/2011 and Monitoring plan revision 1.0 dated 15/07/2010.

## 2.2 Follow-up Interviews

On 28/03/2011 Bureau Veritas Certification performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. A representative of 4ENERGIA, UAB was interviewed (see 5 References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
4ENERGIA, UAB	Organizational structure, responsibilities and authorities Project implementation and technology Training of personnel Quality management procedures Metering equipment control Monitoring record keeping system Environmental requirements Monitoring plan Monitoring report

## 2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification 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 GHG emission reduction calculation.

If the Verification Team assessing the monitoring report and supporting documents identifies issues that need to be corrected, clarified or



---

**VERIFICATION REPORT**

---

improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- (a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- (b) Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan;
- (c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

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

### **3 VERIFICATION CONCLUSIONS**

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

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow-up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project did not result in any Clarification and Corrective Action requests.

The number between brackets at the end of each section corresponds to the VVM paragraph.

#### **3.1 Project approval by Parties involved (90-91)**

A written project approval (Letter of Approval) from the Investor party was provided, issued by Swedish Energy Agency on 15/01/2008.

A written project approval (Letter of Approval) from the Host party was provided, issued by Lithuanian Ministry of Environment on 30/01/2008.

The above mentioned written approvals are unconditional (the Project approval does not provide any specific additional conditions for the Project implementation and monitoring).



### 3.2 Project implementation (92-93)

The project consisting of two near-by wind power plants took over the shares of and control in the following Lithuanian companies:

- Lariteksas UAB – developer of the Sudenai 8 MW wind power plant.
- Vejo Elektra UAB – developer of the Lendimai 6 MW wind power plant.

These companies are operated by 4ENERGIA UAB which is the part of the the OÜ Nelja Energiam (4Energia), (see <http://www.4energia.ee/index.php/lang/eng/category/about-us>).

The project will reduce greenhouse gas emissions by partially substituting power production in other power plants of Lithuania that run on fossil fuel.

The Wind Power Park started to deliver power in December 2008.

The project is implemented according to the PDD, this was verified already during the previous verification. There are no project changes identified during the monitoring period. The project activity was completely operational during the monitoring period, the project has operated without significant shutdowns and failures.

Emission reduction data of the 2<sup>nd</sup> monitoring period are as following:

Net power generation, kWh, Sudenai	15 242 869
Net power generation, kWh, Lendimai	11 433 485
Net power generation, kWh, total	26 676 354
Annual Emission reduction, tCO <sub>2</sub> , Sudenai	9 587,765
Annual Emission reduction, tCO <sub>2</sub> , Lendimai	7 191,662
Total emission reduction, tCO <sub>2</sub> e	16 779
Estimated emission reduction, tCO <sub>2</sub> e	18 223

The project has not reached the estimated annual capacity, basically because of the lower average wind speed in the region during the monitoring period. The lower net delivery has also resulted in lower emission reduction: 16 779 tCO<sub>2</sub> in 2010 instead of estimated 18 233 tCO<sub>2</sub>.

### 3.3 Compliance of the monitoring plan with the monitoring methodology (94-98)

The approach and data sources used for monitoring were analyzed and compared with the requirements of the revised monitoring plan (version 1.0, dated 15/07/2010).





All data sources for calculation emission reduction are clearly identified, reliable and transparent; the data sources are financial invoices based on power supply and consumption reports used for calculating as the initial data source. The data are reliable and transparent, the accounting is controlled both by Lariteksas UAB and Vejo Energija UAB on one side and by LIETUVOS ENERGIJA, AB on the other side.

The default emission factor 0,629 tCO<sub>2</sub>/MWh is used as required by the PDD. There is no requirement to review this factor during the crediting period.



### **3.4 Revision of the monitoring plan (99-100)**

The Monitoring plan is revised to address FAR's, issued during the previous verification. All these FAR's are related to the improvement of data management (see section 3.5).

The proposed revision improves the quality of the data management system in order to minimise the risk of mistakes and misstatements. Hence, revision of the monitoring plan does not change conformity with the relevant rules and regulations for the establishment of monitoring plans.

### **3.5 Data management (101)**

There were 5 FAR's issued during the previous verification concerning data management:

FAR 1 Please, provide basic JI requirements of training for the project manager;

FAR 2 Please, document the responsibilities of the project manager which are related with power accounting and monitoring emission reduction;

FAR 3 Documented routines might be prepared for archiving data which is required for monitoring. The procedure might define responsibilities and the retention period for archiving data to ensure that the data will be available for at least two years after the end of the crediting period;

FAR 4 Identification data, calibration and maintenance dates of the electric power metering devices might be included in the monitoring report;

FAR 5 Checks by a second person not performing the calculations over manual data transfers, changes in assumptions and the overall reliability of the calculation processes should be implemented;

FAR 6 Please, define the requirements for net power production calculation in the revised monitoring plan and submit it for the determination by the accredited independent entity until the next verification.

The response to these FAR's was provided in the monitoring report, Annex 5, the referenced documents were also provided for verification. The response was found acceptable and all FAR's from the previous verification are closed (see Annex A for more details).

The monitoring report is based on monthly power supply and consumption reports and invoices, issued by the transmission system operator (LIETUVOS ENERGIJA, AB). These reports and invoices for data quality assurance are compared with data from SCADA database based on measurement results of meters which are installed on wind turbines. The project assistant of 4ENERGIJA, UAB transfers data on a monthly basis from the reports provided by LIETUVOS ENERGIJA, AB and data obtained



---

**VERIFICATION REPORT**

---

from SCADA database to MS Excel Monthly data worksheet. Based on this the project assistant generates annual production reports which are updated electronically immediately after receiving monthly reports. Annual reports are also issued as a printout document. Annual production reports in turn form the basis for filling out the Monitoring protocol for the periodic GHG emission reduction calculations for the JI project.

All data in the monitoring report were checked with data provided in monthly power supply and consumption reports and invoices. No mistakes or misstatements have been found in the monitoring report.

The calibration equipment is sealed and functioned without any failures during the monitoring period.

FAR1 is issued with request to address it in the next monitoring report: Please provide simplified single-line electric diagram with exact position of each electric meter in monitoring scheme

### **3.6 Verification regarding programmes of activities (102-110)**

Not applicable.



#### 4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 2nd monitoring period verification of “Sudenai and Lendimai wind power park joint implementation project”, which applies the project specific methodology. The verification 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 verification consisted of the following three phases: i) a desk review of the project design, baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and issuance of the final verification report and opinion.

The management of 4ENERGIA, UAB is responsible for the preparation of the GHG emission data and the reported GHG emission reductions of the project on the basis set out within the project Monitoring Plan revision 1.0 (dated 15/07/2010).

The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 1.0 (dated 21/02/2011) for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in the approved project design documents. The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project’s GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2010 to 31/12/2010

Baseline emissions:	16 779 t CO <sub>2</sub> equivalents;
Project emissions:	0 t CO <sub>2</sub> equivalents;
Emission Reductions:	16 779 t CO <sub>2</sub> equivalents.



## 5 REFERENCES

### Category 1 Documents:

Documents provided by 4ENERGIA, UAB that relate directly to the GHG components of the project.

- /1/ PDD, version 8, dated 26/05/2009
- /2/ Initial and first verification report, No. Lithuania-VER/0006/2010, issued by Bureau Veritas certification, dated 25/06/2010
- /3/ Monitoring Report, version 1.0, dated 21/02/2011
- /4/ Monitoring plan, revision 1.0, dated 15/07/2010

### Category 2 Documents:

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

- /1/ Electric power delivery and consumption reports and invoices, signed by Lariteksas UAB, Vejo Elektra UAB and Lietuvos energija AB, year 2010
- /2/ Technical passports (with calibration records inside) for electric power meters
- /3/ Excel spreadsheet "Monitoring data Sudenai-Lendimai", dated 21/02/2011

### Persons interviewed:

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

- /1/ Tadas Navickas, director (4ENERGIA, UAB, Lariteksas UAB, Vejo Elektra UAB)
- /2/ Julius Mikalauskas, project manager (4ENERGIJA, UAB)
- /3/ Ieva Vaišvilas, project assistant (4ENERGIJA, UAB)

## VERIFICATION REPORT

## APPENDIX A: SUDENAI AND LENDIMAI WIND POWER PARK JOINT IMPLEMENTATION PROJECT VERIFICATION PROTOCOL

### Check list for verification, according to the joint implementation determination and verification manual (version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
<b>Project approvals by Parties involved</b>				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	A written project approval (Letter of Approval) from the Investor party was provided, issued by Swedish Energy Agency on 15/01/2008. A written project approval (Letter of Approval) from the Host party was provided, issued by Lithuanian Ministry of Environment on 30/01/2008. These Letters of Approval were submitted for IAE already during the previous verification and were found acceptable.	O.K.	O.K.
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	O.K.	O.K.
<b>Project implementation</b>				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	<p>The project implementation has been checked according to the information provided in the PDD:  <a href="http://ji.unfccc.int/UserManagement/FileStorage/UEHOBGRNYT M734ZC89AQ2J0FL6KPD5">http://ji.unfccc.int/UserManagement/FileStorage/UEHOBGRNYT M734ZC89AQ2J0FL6KPD5</a>.</p> <p>The project consisting of two near-by wind power plants took over the shares of and control in the following Lithuanian companies:</p> <ul style="list-style-type: none"> <li>• Lariteksas UAB – developer of the Sudenai 8 MW wind power plant.</li> <li>• Vejo Elektra UAB – developer of the Lendimai 6 MW wind power plant.</li> </ul> <p>These companies are operated by 4ENERGIA UAB which is the</p>	O.K.	O.K.



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion								
		part of the the OÜ Nelja Energiam (4Energia), ( <a href="http://www.4energia.ee/index.php/lang/eng/category/about-us">http://www.4energia.ee/index.php/lang/eng/category/about-us</a> ). The turbines were put into operation in December 2008. The electric power meters were installed according to the requirements of the national legislation: the accuracy class for this type of commercial and control measurement devices is not less than 0,5 s. See more details on the electric power meters' validation status in 101 (b) below.										
93	What is the status of operation of the project during the monitoring period?	There are no project changes identified during the monitoring period. The project activity was completely operational during the monitoring period, the project has operated without significant shutdowns and failures, except for an unplanned change of one of the turbines vanes which was violated by lightning. The project has not reached the estimated annual capacity, basically because of the lower average wind speed in the region during the monitoring period. The lower net delivery has also resulted in lower emission reduction: 16 779 tCO <sub>2</sub> in 2010 instead of estimated 18 233 tCO <sub>2</sub> .	O.K.	O.K.								
<b>Compliance with monitoring plan</b>												
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	<p>The approach and data sources used for the monitoring were analyzed and compared with the requirements of the monitoring plan revision (version 1.0, 15/07/2010, see more detail concerning determination of this change on 99 (a), 99 (b) below. The summary results of this analysis are described in the table below:</p> <table border="1"> <thead> <tr> <th>Requirement</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>Continuous measurements</td> <td></td> </tr> <tr> <td>EGy – Net electricity supplied to the grid, MWh</td> <td>O.K.</td> </tr> <tr> <td>Electricity production according to SCADA , MWh ( for data quality assurance purpose)</td> <td>O.K.</td> </tr> </tbody> </table>	Requirement	Results	Continuous measurements		EGy – Net electricity supplied to the grid, MWh	O.K.	Electricity production according to SCADA , MWh ( for data quality assurance purpose)	O.K.	O.K.	O.K.
Requirement	Results											
Continuous measurements												
EGy – Net electricity supplied to the grid, MWh	O.K.											
Electricity production according to SCADA , MWh ( for data quality assurance purpose)	O.K.											
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing	Not applicable.	O.K.	O.K.								



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?			
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources are financial invoices based on power dispatch reports issued by the national grid operator LIETUVOS ENERGIJA, AB are used for calculating as the initial data source. The data are reliable and transparent, the accounting is controlled both by Lariteksas UAB and Vejo Energija UAB on one side and by LIETUVOS ENERGIJA, AB on the other side.	O.K.	O.K.
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	The default emission factor EFLE 0,629 tCO <sub>2</sub> /MWh is used as required by the PDD. There is no requirement to review this factor during the crediting period.	O.K.	O.K.
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	Not applicable.	O.K.	O.K.
<b>Applicable to JI SSC projects only</b>				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	Not applicable.	O.K.	O.K.
<b>Applicable to bundled JI SSC projects only</b>				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	Not applicable.	O.K.	O.K.
97 (b)	If the determination was conducted on the basis of	Not applicable.	O.K.	O.K.





## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	an overall monitoring plan, have the project participants submitted a common monitoring report?			
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable.	O.K.	O.K.
<b>Revision of monitoring plan</b>				
<b>Applicable only if monitoring plan is revised by project participant</b>				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	The monitoring plan is revised to address FAR's, issued during the previous verification. All these FAR's are related to improvement of data management (see 101 below for verification details).	O.K.	O.K.
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	The proposed revision improves the quality of the data management system in order to minimise the risk of mistakes and misstatements.	O.K.	O.K.
<b>Data management</b>				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	There were 5 FAR's issued during the previous verification concerning data management. The response to these FAR's was provided in the monitoring report Annex 5, referenced documents were also provided for verification. All responses were found acceptable and hence FAR's from the previous verification are closed:  FAR 1: Please, provide basic JI requirements of training for the project manager. <u>Response:</u> refer to the Training sections of the Monitoring Plan	O.K.	O.K.



VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>ver. 1.0 and of this Monitoring Report. The trainings to the involved staff were provided in the years 2008, 2010 and 2011.  <u>Verification findings:</u> all employees were interviewed, and it is evident that they have got the necessary knowledge of the project monitoring requirements. Hence, FAR 1 is closed.</p> <p>FAR 2: Please, document the responsibilities of the project manager which are related with power accounting and monitoring emission reduction.  <u>Response:</u> the responsibilities of the project manager are defined in the Monitoring Plan ver. 1.0.  <u>Verification findings:</u> the responsibilities for the manager and project assistant are clearly described in the Monitoring plan section 3. Hence, FAR 2 is closed.</p> <p>FAR 3: Documented routines might be prepared for archiving data, which is required for monitoring. The procedure might define responsibilities and the retention period for the data archiving to ensure that the data will be available for at least two years after the end of the crediting period.  <u>Response:</u> The document archiving procedure and retention period are documented in the Monitoring Plan ver. 1.0.  <u>Verification findings:</u> it is defined that all records are maintained by the project assistant in hard copy and electronic format at least until the end of 2014 for verification. Monitoring and verification reports will be archived together with electricity production and consumption reports. This requirement was also found implement in practise, hence, FAR3 is closed.</p> <p>FAR 4: Identification data, calibration and maintenance dates of the electric power metering devices might be included in the</p>		



VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>monitoring report.  <u>Response:</u> the meter identification information and calibration data are included in the Monitoring Plan ver. 1.0 and in this Monitoring Report No. 2.  <u>Verification findings:</u> the relevant information is included in the monitoring report, hence, FAR 4 is closed.</p> <p>FAR 5: Checks by a second person not performing the calculations over manual data transfers, changes in assumptions and the overall reliability of the calculation processes should be implemented.  <u>Response:</u> the data verification procedure is defined in the Monitoring Plan ver. 1.0.  <u>Verification findings:</u> a third party is subcontracted to assist with quality assurance in the process (LHCarbon OÜ, represented by Hannu Lamp), calculation results are also reviewed by the manager prior signing. Hence, FAR 5 is closed.</p> <p>FAR 6: Please, define the requirements for net power production calculation in the revised monitoring plan, and submit it for the determination by the accredited independent entity until the next verification.  <u>Response:</u> the calculation of net power production is defined in the Monitoring Plan ver. 1.0 and in this Monitoring Report No. 2.  <u>Verification findings:</u> it is clearly defined in the monitoring report now that net power production is calculated as a difference between actual power production and active power consumption. Active power consumption is measured with the same measuring equipment as used for measuring of actual power production. The equipment has 2 separate electronic registers (1 (one) for actual power production and 1 (one) for active power consumption). The overall delivered and consumed power amount is divided up between Lariteksas UAB and Vejo Elektra UAB using ratio 4:3. This monitoring plan clarification was found acceptable and hence</p>		



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>FAR 6 is closed.</p> <p>The monitoring report is based on monthly power supply and consumption reports and invoices, issued by the transmission system operator (LIETUVOS ENERGIJA, AB). These reports and invoices for data quality assurance are compared with data from SCADA database based on measurement results of meters which are installed on wind turbines. The project assistant of 4ENERGIJA, UAB transfers data on a monthly basis from the reports provided by LIETUVOS ENERGIJA, AB and data obtained from SCADA database to MS Excel Monthly data worksheet. Based on this the project assistant generates Annual production reports which are updated electronically immediately after receiving monthly reports. Annual reports are also issued as a printout document. Annual production reports in turn form the basis for filling out the Monitoring protocol for periodic GHG emission reduction calculations for the JI project.</p>		
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	<p>The calibration status of the measuring equipment was verified and found valid. The calibration status was valid during all the monitoring period. The calibration periodicity is 8 years according to the national legislation. The calibration equipment is sealed and functioned without any failures during the monitoring period. The results of the monitoring equipment validation status and sealing were verified and are described in the table below:</p>	FAR1	FAR1



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion						
		<table border="1"> <tr> <td>Measurement device, No</td> <td>Validation status</td> </tr> <tr> <td>VJ-3.T-101 (commercial accounting), No 289132, calibrated on 29/09/2005</td> <td>O.K.</td> </tr> <tr> <td>VJ-3.T-101/D (duplicated commercial accounting), No 379391, calibrated on 16/08/2006</td> <td>O.K.</td> </tr> </table> <p>FAR1: Please provide simplified single-line electric diagram with exact position of each electric meter in monitoring scheme.</p>	Measurement device, No	Validation status	VJ-3.T-101 (commercial accounting), No 289132, calibrated on 29/09/2005	O.K.	VJ-3.T-101/D (duplicated commercial accounting), No 379391, calibrated on 16/08/2006	O.K.		
Measurement device, No	Validation status									
VJ-3.T-101 (commercial accounting), No 289132, calibrated on 29/09/2005	O.K.									
VJ-3.T-101/D (duplicated commercial accounting), No 379391, calibrated on 16/08/2006	O.K.									
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	See 101 (a) above, response to FAR 3.	O.K.	O.K.						
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	See 101 (a) above.	O.K.	O.K.						
<b>Verification regarding programs of activities (additional elements for assessment)</b>										
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable.	O.K.	O.K.						
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable.	O.K.	O.K.						
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable.	O.K.	O.K.						
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable.	O.K.	O.K.						
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable.	O.K.	O.K.						
<b>Applicable to sample-based approach only</b>										



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
106	<p>Does the sampling plan prepared by the AIE:</p> <p>(a) Describe its sample selection, taking into account that:</p> <p>(i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as:</p> <ul style="list-style-type: none"> <li>– The types of JPAs;</li> <li>– The complexity of the applicable technologies and/or measures used;</li> <li>– The geographical location of each JPA;</li> <li>– The amounts of expected emission reductions of the JPAs being verified;</li> <li>– The number of JPAs for which emission reductions are being verified;</li> <li>– The length of monitoring periods of the JPAs being verified; and</li> <li>– The samples selected for prior verifications, if any?</li> </ul>	Not applicable.	O.K.	O.K.
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	Not applicable.	O.K.	O.K.
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	Not applicable.	O.K.	O.K.
109	Is the sampling plan available for submission to the	Not applicable.	O.K.	O.K.



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	secretariat for the JISC.s ex ante assessment? (Optional)			
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	Not applicable.	O.K.	O.K.



VERIFICATION REPORT

**Table 2 Resolution of Corrective Action and Clarification Requests**

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
Not applicable.		Not applicable.	Not applicable.