

# VERIFICATION REPORT 4ENERGIA UAB

# INITIAL AND FIRST PERIODIC VERIFICATION OF THE SUDENAI AND LENDIMAI WIND POWER JOINT IMPLEMENTATION PROJECT

MONITORING PERIOD:

REPORT NO. LITHUANIA- VER #/0006/2010 REVISION NO. 02 1 SEPTEMBER 2008 TO 31 DECEMBER 2009

BUREAU VERITAS CERTIFICATION



| Date of first issue:<br>30/04/2010  | Organizationa<br>Bureau V<br>SAS    | al unit:<br>/eritas Certification Holding  |  |  |
|---|-------------------------------------|--|--|--|
| Client:<br>4ENERGIA UAB   | Client ref.:<br>Julius Mi           | kalauskas, project manager   |  |  |
| Summary:<br>Bureau Veritas Certification has carried out the initial and 1st periodic verification of the JI Track II project<br>"Sudenai and Lendimai Wind Power Joint Implementation Project" based on UNFCCC criteria for the JI, as<br>well as criteria given to ensure consistent project operations, monitoring and reporting. UNFCCC criteria refer<br>to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI<br>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 Independent Entities of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the monitoring report, project design document including its monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the 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. |                                     |  |  |  |
| The first output of the verification provide the first output of the verification provide the forward Actions Requests (CL, CAR)  | rocess is a list<br>and FAR), prese | of Clarification Requests, Corrective Actions Requests, nted in Appendix A.              |  |  |
| In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in determined and approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately.<br>The monitoring system is in place and the project is generating GHG emission reductions.<br>The GHG emission reduction is calculated without material misstatements.<br>Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents.         |                                     |  |  |  |
| Reporting period: From 01/09/2008 to  | 31/12/2009.                         |  |  |  |
| Baseline emissions:18562t CO2 equivalentsProject emissions:0t CO2 equivalentsProject leakage::0t CO2 equivalentsEmission Reductions:18562t CO2 equivalents  |                                     |  |  |  |
| Report No.: Subject Gr  | oup:                                |  |  |  |
| Project title:       Indexing terms         SUDENAI AND LENDIMAI WIND POWER       Climate Change, Kyoto Protocol, JI, Emission         JOINT IMPLEMENTATION PROJECT       Reductions, Verification  |                                     |  |  |  |
| Work carried out by:<br>Team Leader : Tomas Paulaitis   |                                     | No distribution without permission from the<br>Client or responsible organizational unit |  |  |
| Work verified by:<br>Leonid Yaskin – Internal technical reviewer  |                                     | Limited distribution   |  |  |
| Date of this revision:Rev. No.:Nu25/06/201002   | mber of pages:<br><b>35</b>         | Unrestricted distribution  |  |  |



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#### Abbreviations

| Accredited Independent Entities                        |
|--|
| Corrective Action Request                              |
| Clarification Request                                  |
| Carbon Dioxide   |
| Emission Reduction Units                               |
| Forward Action Request                                 |
| Green House Gas(es)                                    |
| International Emissions Trading Association            |
| Joint Implementation                                   |
| Monitoring Plan  |
| Monitoring report                                      |
| Prototype Carbon Fund                                  |
| Project Design Document                                |
| Joint stock company (in Lithuanian language)           |
| United Nations Framework Convention for Climate Change |
|  |



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# 1 INTRODUCTION

4ENERGIA UAB has commissioned Bureau Veritas Certification to verify the emission reductions of its JI project "Sudenai and Lendimai Wind Power Joint Implementation Project" (hereafter called "the project") near to the villages Sudenai and Lendimai, Kretingos county, Lithuania. The order comprises the initial and the first periodic verification and is related to emission reductions achieved during 1 September 2008 to 31 December 2009.

This report summarizes the findings of the verification 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 purpose of this verification is a combined initial and 1st periodic verification.

The objective of the initial verification is to verify that the project is implemented as planned and described in the PDD, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions.

The objective of the periodic verification is the review and ex post determination by an AIE of the GHG emission reductions. It includes the verification of the data given in the monitoring report by checking the monitoring records and the emissions reduction calculation.

#### 1.2 Scope

The verification of this project is based on the Project Design Document, the Monitoring Report (covers September 01, 2008 to December 31, 2009), the monitoring plan as set out in the PDD, supporting documents made available to Bureau Veritas Certification, and information obtained through the on-site interviews and on-site assessment. The documents and information are reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

Bureau Veritas Certification, based on the recommendations in the Validation and Verification Manual (IETA/PCF), has employed a riskbased approach in the verification, focusing on the identification and reporting of significant risks and on reliability of project monitoring and generation of Emission Reductions Units (ERU).

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



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The verification is not meant to provide any consulting towards the Client. However, stated requests for forward actions and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

# **1.3 GHG Project Description**

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 with is the part of the the OÜ Nelja Energiam (4Energia), (see <u>http://www.4energia.ee/index.php/lang/eng/category/about-us</u>).

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

Wind Power Park started to deliver power on December 2008.

Emission reduction data are as following:

|  | Year 2008 | Year 2009  |
|--|-----------|------------|
| Net power generation EGy, kWh, Sudenai                             | 1 106 070 | 15 820 969 |
| Net power generation EGy, kWh, Lendimai                            | 715 134   | 11 867 113 |
| Annual Emission reduction, tCO2, Sudenai                           | 695,718   | 9 951,390  |
| Annual Emission reduction, tCO2, Lendimai                          | 449,819   | 7 464,414  |
| Total emission reduction, tCO2e, Sudenai & Lendimai                | 1 146     | 17 416     |
| Estimated emission reduction, tCO2e, Sudenai & 9 662<br>Lendimai   |           | 28 988     |
| Total emission reduction, tCO2e, Sudenai & Lendimai, 2008-2009     | 18 562    |            |
| Estimated emission reduction, tCO2e, Sudenai & Lendimai, 2008-2009 | 38 650    |            |





# 2 METHODOLOGY

The verification is as a desk review and field visit including discussions and interviews with selected experts and stakeholders.

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

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

The verification protocol consists of one table under Initial Verification checklist and four tables under Periodic verification checklist. The different columns in these tables are described in Figure 1.

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

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



| Initial Verification Protocol Table 1   |   |  |   |  |
|---|---|--|---|--|
| Objective                               | Reference   | Comments   | Conclusion (CARs/FARs)  |  |
| The requirements the project must meet. | Gives reference to<br>where the<br>requirement is<br>found. | Description of<br>circumstances and<br>further<br>comments on the<br>conclusion. | This is either acceptable based on<br>evidence provided (OK), or a<br>Corrective Action Request (CAR)<br>of risk or non-compliance of the<br>stated requirements. Forward<br>Action Request (FAR) indicates<br>essential risks for further periodic<br>verifications. |  |

| Periodic Verification Checklist Protocol Table 2: Data Management System/Controls  |   |  |  |  |
|--|---|--|--|--|
| Identification of potential<br>reporting risk  | Identification,<br>assessment and testing<br>of management controls   | Areas of residual risks  |  |  |
| The project operator's data<br>management system/controls<br>are assessed to identify<br>reporting risks and to assess<br>the data management<br>system's/control's ability to<br>mitigate reporting risks. The<br>GHG data management<br>system/controls are assessed<br>against the expectations<br>detailed in the table. | <ul> <li>A score is assigned as follows:</li> <li>Full - all best-practice expectations are implemented.</li> <li>Partial - a proportion of the best practice expectations is implemented</li> <li>Limited - this should be given if little or none of the system component is in place.</li> </ul> | Description of circumstances and further<br>commendation to the conclusion. This is<br>either acceptable based on evidence<br>provided (OK), or a Corrective Action<br>Request (CAR) of risk or non compliance<br>with stated requirements. The corrective<br>action requests are numbered and<br>presented to the client in the verification<br>report. The Initial Verification has<br>additional Forward Action Requests<br>(FAR). FAR indicates essential risks for<br>further periodic verifications. |  |  |

| Periodic Verification Protocol Table 3: GHG calculation procedures and management control |  |
|---|--|
| testing   |  |

| Identification of potential<br>reporting risk   | Identification, assessment and testing of management controls  | Areas of residual risks  |
|---|--|--|
| Identify and list potential reporting<br>risks based on an assessment of<br>the emission estimation<br>procedures, i.e.<br>> the calculation methods,<br>> raw data collection and<br>sources of supporting<br>documentation,<br>> reports/databases/informat<br>ion systems from which<br>data is obtained.<br>Identify key source data. Examples<br>of source data include metering<br>records process monitors | Identify the key controls for each area<br>with potential reporting risks. Assess<br>the adequacy of the key controls and<br>eventually test that the key controls are<br>actually in operation.<br>Internal controls include (not<br>exhaustive):<br>> Understanding of<br>responsibilities and roles<br>> Reporting, reviewing and<br>formal management<br>approval of data;<br>> Procedures for ensuring<br>data completeness | Identify areas of residual<br>risks, i.e. areas of<br>potential reporting risks<br>where there are no<br>adequate management<br>controls to mitigate<br>potential reporting risks<br>Areas where data<br>accuracy, completeness<br>and consistency could be<br>improved are highlighted. |



| operational logs,<br>laboratory/analytical data,<br>accounting records utility data and  | conformance with reporting<br>guidelines, maintenance of<br>data trails atc  |  |
|--|--|--|
| vendor data. Check appropriate<br>calibration and maintenance of<br>equipment, and assess the likely<br>accuracy of data supplied.<br>Focus on those risks that impact<br>the accuracy, completeness and<br>consistency of the reported data.<br>Risks are weakness in the GHG<br>calculation systems and may          | <ul> <li>Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures;</li> <li>Controls over the computer information systems:</li> </ul>                      |  |
| <ul> <li>include:</li> <li>manual transfer of data/manual calculations,</li> <li>unclear origins of data,</li> <li>accuracy due to technological limitations,</li> <li>lack of appropriate data protection measures. For example, protected calculation cells in spreadsheets and/or password restrictions.</li> </ul> | <ul> <li>Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes</li> <li>Comparing and analysing the GHG data with previous periods, targets and benchmarks.</li> </ul> |  |
|  | When testing the specific internal controls, the following questions are considered:   |  |
|  | <ol> <li>Is the control designed properly to<br/>ensure that it would either prevent<br/>or detect and correct any<br/>significant misstatements?</li> </ol>   |  |
|  | 2. To what extent have the internal controls been implemented according to their design;   |  |
|  | 3. To what extent have the internal controls (if existing) functioned properly (policies and procedures have been followed) throughout the period?   |  |
|  | 4. How does management assess the internal control as reliable?  |  |



| Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing  |  |  |  |
|---|--|--|--|
| Areas of residual<br>risks  | Additional verification testing performed  | Conclusions and Areas Requiring<br>Improvement<br>(including Forward Action Requests)  |  |
| List the residual areas<br>of risks. Table 2<br>where detailed audit<br>testing is necessary.<br>In addition, other<br>material areas may<br>be selected for<br>detailed audit testing. | <ul> <li>The additional verification testing performed is described. Testing may include:</li> <li>1. Sample cross checking of manual transfers of data</li> <li>2. Recalculation</li> <li>3. Spreadsheet 'walk throughs' to check links and equations</li> <li>4. Inspection of calibration and maintenance records for key equipment</li> <li>Check sampling analysis results</li> <li>Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</li> </ul> | <ul> <li>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties should be highlighted.</li> <li>Errors and uncertainty can be due to a number of reasons: <ul> <li>Calculation errors. These may be due to inaccurate manual transposition, use of inappropriate emission factors or assumptions etc.</li> <li>Lack of clarity in the monitoring plan. This could lead to inconsistent approaches to calculations or scope of reported data.</li> <li>Technological limitations. There may be inherent uncertainties (error bands) associated with the methods used to measure emissions e.g. use of particular equipment such as meters.</li> <li>Lack of source data. Data for some sources may not be cost effective or practical to collect. This may result in the use of default data which has been derived based on certain assumptions/conditions and which will therefore have varying applicability in different situations.</li> </ul> </li> <li>The second two categories are explored with the site personnel, based on their knowledge and experience of the processes. High risk process parameters or source data (i.e. those with a significant influence on the reported data, such as meters) are reviewed for these uncertainties.</li> </ul> |  |

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



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### 2.1 Review of Documents

The Monitoring Report (MR) and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved methodology, Kyoto Protocol, Clarifications on Verification Requirements were reviewed by AIE.

The verification findings presented in this report relate to the project as described in the PDD Version 8 and Project Monitoring Report Version 3.

# 2.2 Follow-up Interviews

On 23/04/2010 Bureau Veritas Certification performed field visit and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of 4 Energia, UAB and LITGRID, AB were interviewed (see References). The main topics of the interviews are summarized in Table 1.

| Interviewed organization                | Interview topics   |
|---|--|
| Vejo Elektra UAB                        | Implementation of project, responsibilities and legal requirements.  |
| 4 ENERGIA UAB                           | Monitoring of electricity production, calibration and maintenance of the electric power meters.  |
| LITGRID UAB,<br>LIETUVOS ENERGIJA<br>AB | Monitoring and control of the net electric power delivered to the grid, calibration and maintenance of the electric power meters.<br>Note: LIETUVOS ENERGIJA AB has transferred responsibilities to operate national grid to LITGRID UAB since 01/01/2010. |

 Table 1
 Interview topics

# 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 needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

Findings established during the initial verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined by the PDD;

ii) requirements set by the MP or qualifications in a verification opinion have not been met; or

iii) there is a risk that the project would not be able to deliver (high quality) ERUs.

Forward Action Requests (FAR) are issued, where:



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iv) the actual status requires a special focus on this item for the next consecutive verification, or

v) an adjustment of the MP is recommended.

The verification team may also use the term Clarification Request (CL), which would be where:

vi) additional information is needed to fully clarify an issue.

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

#### **3 INITIAL VERIFICATION FINDINGS**

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

- The findings from the desk review of the original project activity 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 verification protocol in Appendix A.
- 2) The conclusions for verification subject are presented.

In the final verification report the discussions and the conclusions that followed the preliminary verification report and possible corrective action requests should also be encapsulated in this section.

#### 3.1 Remaining issues, FAR's from determination

There are no unresolved issues prescribed in the final determination report (report No. 982879, revision 2, issued by TUV SUD Industries Service GmbH on 24/02/2009).

#### 3.2 **Project Implementation**

#### 3.2.1 Discussion

The project implementation has been checked according to the information provided in the PDD. It can be stated that the project has been implemented in accordance with the PDD.

3.2.2 Findings None.



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#### 3.3.3 Conclusions

Bureau Veritas confirms that:

- The equipment has been installed as specified in the PDD;
- The required calibrated monitoring equipment is in place;
- Responsibilities to perform monitoring are defined;
- The qualification of responsible personnel is sufficient;
- The wind park was commissioned on May 2009 and was ready to generate emission reductions before the start of the 1st monitoring period.

# 3.3 Internal and External Data

#### 3.3.1 Discussion

Monitoring routines to account for the electric power supplied to the grid have been checked. It can be stated that internal data are collected in accordance with the monitoring plan. The emission factor for electricity production at Lietuvos elektrine (Lithuanian power plant) is estimated as an external fixed value (0,629 tCO2/MWh) for all the monitoring period.

#### 3.2.2 Findings

None.

#### 3.3.3 Conclusions

Bureau Veritas confirms that:

- Internal data collecting routines are in place;
- Internal data are available for emission reduction calculations.

# 3.4 Environmental and Social Indicators

#### 3.4.1 Discussion

Monitoring results of the noise level in running the wind power plant have been reviewed. It is confirmed in the monitoring protocol, that the noise level does not exceed the allowed level according to legal requirements. Vejo Elektra UAB and Lariteksas UAB director confirmed that no environmental or social incidents happened during the year 2008-2009.

#### 3.4.2 Findings

None.

#### 3.4.3 Conclusions

Bureau Veritas confirms that:

- Environmental impacts are not significant and are managed according to applicable legal requirements.



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### 3.5 Management and Operational System

In order to ensure the successful operation of the Client project and the credibility and verifiability of the emission reductions achieved, the project must have a well defined management and operational system.

#### 3.5.1 Discussion

The existing management and operational system were checked and discussed with the company representatives.

Despite the fact that wind power projects are not complicated for GHG monitoring and detailed documented procedures are usually not necessary, FAR 1, FAR 2, FAR 3 are issued.

Emergency procedures in case of electric power meters failure are clearly defined in the contract with the grid operator.

#### 3.5.2 Findings

| Comments   | Conclusion   |
|--|--|
| FAR 1:<br>Please provide basic JI requirements training for<br>project manager.  | This FAR will be verified<br>during the next periodic<br>verification. |
| FAR 2:<br>Please document responsibilities of the project<br>manager which are related with power accounting<br>and emission reduction monitoring.   |  |
| <b>FAR 3:</b><br>Documented routines might be prepared for data,<br>which is required for monitoring, archiving. The<br>procedure might define responsibilities and<br>retention period for these data archiving, to<br>ensure, that these data will be available at least<br>two years after the end of crediting period. |  |

#### 3.5.3 Conclusions

Bureau Veritas confirms that:

- A simple management system is implemented, but should be improved until the next verification (see FAR 1, FAR 2, FAR 3);
- Monitoring responsibilities are clearly defined, the responsible personnel is competent;
- Necessary emergency procedures are defined.



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# **4 FIRST PERIODIC VERIFICATION FINDINGS**

# 4.1 Remaining issues, CAR's, FAR's from previous verification

They are not applicable for the first verification.

# 4.2 Completeness of Monitoring

#### 4.2.1 Discussion

It can be stated that monitoring routines are implemented in accordance with the monitoring plan. The reporting was performed without any deviations from the monitoring plan.

#### 4.2.2 Findings

| Comments  | Conclusion   |
|---|--|
| <u>CAR 2:</u><br>Verification team observes that an<br>information/process flow diagram is not<br>presented. Such diagram has to be added<br>to the MR regardless its simplicity.   | Monitoring report version 3.2<br>was found acceptable, hence<br>CAR 2 is closed. |
| <b>FAR 4:</b><br>Identification data, calibration and<br>maintenance dates of the electric power<br>metering devices might be included in the<br>monitoring report.   | This FAR will be verified<br>during the next periodic<br>verification.           |
| <b>FAR 5:</b><br>Checks by a second person not performing<br>the calculations over manual data<br>transfers, changes in assumptions and the<br>overall reliability of the calculation<br>processes should be implemented. | This FAR will be verified<br>during the next periodic<br>verification.           |

#### 4.2.3 Conclusions

Bureau Veritas confirms that:

- CAR 2 was implemented efficiently;
- The monitoring is in accordance with the monitoring plan of the approved PDD;
- The monitoring report (version 3) is transparent and complete, however FAR 4 is issued to include in the monitoring report important information about power meters calibration status and



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identification anf FAR 5 is issued to implement checks by a second person.

# 4.3 Accuracy of Emission Reduction Calculations

#### 4.3.1 Discussion

Calculations of the emission reductions presented in the monitoring report have been checked.

4.3.2 Findings None.

#### 4.3.3 Conclusions

Bureau Veritas confirms that:

 Emission reduction calculations are carried our according to the monitoring plan of the approved PDD without mistakes and misstatements.

#### 4.4 Quality Evidence to Determine Emission Reductions

#### 4.4.1 Discussion

The calculation of emission reductions was based on internal data (the external emission factor has a fixed value for all monitoring period).

Overall net hourly electricity supplied to the grid declared in the monitoring report (version 1) is in accordance with the data declared in electric power dispatch reports, however, see CAR1 for mistake in the monitoring report.

| Comments  | Conclusion   |
|---|--|
| CAR1:<br>Data in the monitoring report are different<br>from data in the month dispatch document,<br>see:<br>- Active power production (kWh),<br>December 2008 (Annex 1 and Annex<br>2),<br>- Active power consumption (kWh),<br>October (Annex 3). | Data misstatement was<br>corrected in the monitoring<br>report (version 2) and was<br>found acceptable. This<br>misstatement has not<br>influenced total emission<br>reduction data. |
| FAR 6:<br>Please define the requirements for net  | This FAR will be verified during the next periodic   |

#### 4.4.2 Findings



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| power production calculati           | ion in revised | verification. |
|--------------------------------------|----------------|---------------|
| monitoring plan, and sub             | mit it for the |               |
| determination by the                 | accredited     |               |
| independent entity untiverification. | il the next    |               |

4.4.3 Conclusions

Bureau Veritas confirms that:

- CAR 1 was implemented efficiently;
- The monitoring report (version 3) is in conformity with requirements to the quality of evidence.

# 4.5 Management System and Quality Assurance

See clause 3.5 above.

# 5 PROJECT SCORECARD

| Risk Areas                         |   | Conclusion            | าร                   |                                      | Summary of findings and comments  |
|------------------------------------|---|-----------------------|----------------------|--------------------------------------|---|
|                                    |   | Baseline<br>Emissions | Project<br>Emissions | Calculated<br>Emission<br>Reductions |   |
| Completeness                       | Source<br>coverage/<br>boundary<br>definition | ~                     | ✓                    | ~                                    | Relevant sources are covered<br>by the monitoring plan.<br>Boundaries of the project are<br>defined transparently and<br>correctly. |
| Accuracy                           | Physical<br>Measurement<br>and Analysis       | ✓                     | ✓                    | $\checkmark$                         | Physical measurements and analysis are reliable.  |
|                                    | Data<br>calculations                          | √                     | $\checkmark$         | ✓                                    | Data are calculated correctly.  |
|                                    | Data<br>management<br>& reporting             | ~                     | ~                    | $\checkmark$                         | Data management and reporting are reliable.   |
| Consistency Changes in the project |   | ~                     | ~                    | ~                                    | There are no changes in the project; results are consistent to underlying raw data.   |



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### 6 INITIAL AND FIRST PERIODIC VERIFICATION STATEMENT

Bureau Veritas Certification has performed the initial and 1st periodic verification of the project "Sudenai and Lendimai Wind Power Joint Implementation Project". The verification is based on the currently valid documentation of the United Nations Framework Convention on the Climate Change (UNFCCC).

The management of Vejo elektra UAB is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 08. 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 2 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in validated and registered project design documents. 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 calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the determined and approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the following statement:

Reporting period:From 01/09/2008 to 31/12/2009Baseline emissions: 18562t CO2 equivalents.Project emissions: 0t CO2 equivalents.Project leakage:: 0t CO2 equivalents.Emission Reductions: 18562t CO2 equivalents.





# 7 REFERENCES

#### Category 1 Documents:

Documents provided by Vejo elektra UAB and Lariteksas UAB that relates directly to the GHG components of the project.

- /1/ PDD "Sudenai and Lendimai Wind Power Joint Implementation Project", Version 8, 26 May 2009
- /2/ Report No. 982879, revision 2, issued by TUV SUD Industries Service GmbH on 24/02/2009
- /3/ Sudenai and Lendimai Wind Power Joint Implementation Project 1st monitoring report, version 1, 19 January 2010
- /4/ Sudenai and Lendimai Wind Power Joint Implementation Project 1st monitoring report, version 2, 03 May 2010
- /5/ Sudenai and Lendimai Wind Power Joint Implementation Project 1st monitoring report, version 3, 14 June 2010

#### Category 2 Documents:

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

- /1/ Electric power dispatch reports, signed by Lariteksas UAB, Vejo Elektra UAB and Lietuvos energija AB, November-December 2008, January-December 2009
- /2/ Technical passports (with calibration records inside) for commercial electric power meters
- /3/ Power dispatch contract signed by Vejo Elektra UAB and Lietuvos energija AB, signed on 05 November 2008.
- /4/ Print screen copy from Enercon SCADA database.
- /5/ Noise level monitoring reports (issued by Nacionalines visuomenes sveikatos priežiūros laboratorija on higienos Klaipedos visuomenes sveikatos centras on 17 February 2009)

Commissioning documents issued by local authorities to Sudenai and Lendimai wind /6/ power parks on 29 May 2009.





#### Persons interviewed:

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

- /1/ Tada Navickas, managing director (4energia UAB, Lariteksas UAB, Vejo Elektra UAB)
- /2/ Julius Mikalauskas, project manager (4energia UAB)

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# APPENDIX A: PROJECT VERIFICATION PROTOCOL

#### **Table 1: Initial Verification Protocol**

| Objective   | 9  | Reference            | Comments  | Conclusion<br>(CARs/FARs) |
|---|--|----------------------|---|---------------------------|
| 1. Opening  | Session  |                      |   |                           |
| 1.1.  | Introduction to audits   |                      | Before the audit a draft verification protocol and the audit plan were prepared<br>and agreed with the client. The on-site visit was carried out on 23 April 2009,<br>to ensure that the project and monitoring plan are implemented according to<br>the PDD.   | О.К.                      |
| 1.2.  | Clarification of access to data<br>archives, records, plans,<br>drawings etc.  |                      | Access to all data and documents necessary for the audit team to perform its tasks was ensured. All the necessary documents and records are archived in <i>4ENERGIA UAB</i> head office. The grid operator ( <i>LITGRID UAB</i> ) was asked to submit documents related to the maintenance and calibration of electric power meters.  | О.К.                      |
| <b>1.3.</b><br>Who has i contracted                             | Contractors for equipment and<br>installation works<br>nstalled the equipment? Who was<br>for planning etc.?   | PDD section<br>A.4.3 | The wind power plants were produced, supplied, installed, adjusted and commissioned by <i>Enercon</i> . The automatic energy meters were installed by the grid operator. The meters were manufactured by <i>ELGAMA UAB</i> which also maintains them.   | О.К.                      |
| 1.4.<br>Project ins<br>time of ini<br>project sho<br>reductions | Actual status of installation<br>works<br>stallation should be finished at the<br>itial verification in so far that the<br>buld be ready to generate emission<br>afterwards. | PDD section<br>C.1.  | The official commissioning document recognizing that the wind power park was built according to the applicable national legislation was issued on 29/05/2009 by national authorities. The contract for selling – purchasing electricity was signed with <i>Lietuvos energija AB</i> on 05/11/2008 with <i>Vejo Elektra UAB</i> and <i>Lariteksas UAB</i> . The <i>Lariteksas UAB</i> started to deliver electricity to the grid on 01/12/2008, and <i>Vejo Elektra UAB</i> on 04/12/2008. | О.К.                      |



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| 2. Open issues indicated in validation report<br>Especially in projects which are not yet registered at CDM-EB or II-SB, there might be some outstanding issues which should have been indicated by the validation report                   |                       |   |                              |  |  |
| 2.1. Missing steps to final approval  |                       | None reported.  | О.К.                         |  |  |
| 3. Implementation of the project<br>This part covers the essential checks during the  | e on-site inspect     | ion at the project site, which is indispensable for an initial verification.  |                              |  |  |
| <b>3.1. Physical components</b><br>Check the installation of all required facilities<br>and equipment as described by the PDD.  | PDD section<br>A.4.2. | All the equipment has been installed as specified in the PDD. The project involves an 8 MW wind farm at Sudenai (consisting of 4 Enercon E82 2000 kW wind turbines) and a 6 MW wind farm at Lendimai (consisting of 3 Enercon E82 2000 kW wind turbines).   | О.К.                         |  |  |
| <b>3.2. Project boundaries</b><br>Check whether the project boundaries are still<br>in compliance with the ones indicated by the<br>PDD.  | PDD section<br>B.3.   | The project boundaries are without changes and are in compliance with the ones indicated by the PDD.  | О.К.                         |  |  |
| 3.3. Monitoring and metering<br>systems<br>Check whether the required metering<br>systems have been installed. The meters<br>have to comply with appropriate quality<br>standards applicable for the used technology.                       | PDD section<br>D.2.   | The required metering systems as described in the PDD section D.2. have<br>been installed. The commercial accounting for the electric power transferred<br>to the grid is performed in parallel with the commercial electric power meter<br>and duplicated commercial electric power meter.<br>The electric power meters are the property of the electric grid operator, who<br>is responsible for ensuring that the meters conform to the applicable legal<br>requirements.  | О.К.                         |  |  |
| <b>3.4. Data uncertainty</b><br>How will data uncertainty be determined for<br>later calculations of emission reductions? Is<br>this in compliance with monitoring and<br>metering equipment?   | D.3.                  | The maximum allowed deviation of the meters is 0,5 %, this deviation is in accordance with PPD D.3 and in accordance with EN 62053-22.  | О.К.                         |  |  |
| <ul> <li>3.5. Calibration and quality assurance</li> <li>Check how monitoring and metering systems are subject to calibration and quality assurance routines</li> <li>a) with installation;</li> <li>b) during future operation.</li> </ul> | PDD section<br>D.3.   | It is defined in the contracts signed between <i>Lariteksas UAB</i> , <i>Vejo Elektra UAB</i> and <i>Lietuvos energija</i> , <i>AB</i> that <i>Lietuvos energija</i> , <i>AB</i> is the owner of the commercial electric power meters and therefore is responsible for the calibration and maintenance.<br>Two commercial electric power meters were installed:<br>- position P-101 (commercial accounting): serial number 289132, calibrated on 29 September 2005;<br>- position P-102 (duplicated commercial accounting): serial number 379371, calibrated on 16 August 2006.<br>The calibration status was valid during the first monitoring period, see 11.2 below. The calibration periodicity is 8 years according to the national legislation. | О.К.                         |  |  |



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| 3.6. Data acquisition and data<br>processing systems<br>Check the eligibility of used systems.   | PDD section<br>D.4. | As mentioned above in 3.3, the electric power metering system is acceptable.<br>Additionally each turbine has separate meters which send data to Enercon<br>SCADA database. The database data are used monthly to verify the<br>production (these data have been verified, deviation up to 2 percent is e from<br>commercial power metering system was found acceptable because of<br>transmission loses).   | О.К.                   |
| <b>3.7. Reporting procedures</b><br>Check how reports with relevance to the later<br>determination of emission reductions will be<br>generated.  | PDD section<br>D.4. | The responsibility for monitoring lies on the managing director of <i>Vejo Elektra UAB</i> , as specified in the monitoring plan. <i>Vejo Elektra UAB</i> in cooperation with <i>4ENERGIA UAB</i> is to prepare a brief annual monitoring report which includes the information on overall project performance, consumed and produced electric power, emission reductions generated.   | О.К.                   |
| <b>3.8. Documented instructions</b><br>Check whether the personnel performing<br>tasks with sensitivity to the monitoring of<br>emission reductions have access and<br>knowledge of documented instructions,<br>forming a part of the project management<br>system.                  | PDD section<br>D.4. | See 3.7 above; there is no need for any additional documented instructions.  | О.К.                   |
| <b>3.9. Qualification and training</b><br>Check whether the personnel performing<br>tasks with sensitivity to the monitoring of<br>emission reductions has the appropriate<br>competences, capabilities and qualifications<br>to ensure the required data quality.                   | PDD section<br>D.4. | The managing director of <i>Vejo Elektra UAB</i> , who is also managing director of <i>Lariteksas UAB</i> and <i>4ENERGIA UAB</i> , has the necessary competence, capabilities and qualifications to control electric power accounting. Vejo Elektra UAB has outsourced the daily monitoring and verification tasks to 4Energia. The responsible project manager Julius Mikalauskas also has all necessary technical competences.  | О.К.                   |
| <b>3.10. Responsibilities</b><br>Check whether all tasks required to gather<br>data and prepare a monitoring report with the<br>necessary quality have been allocated to<br>responsible employees.   | PDD section<br>D.4. | The monitoring report is prepared by the managing director of the Vejo Elektra UAB in cooperation and consultations with OÜ Nelja Energia.   | О.К.                   |
| <b>3.11. Troubleshooting procedures</b><br>Check whether there are possibilities of<br>redundant data monitoring in case of having<br>problems with the used monitoring<br>equipment. Such procedures may reduce<br>risks for the buyers of emission reductions<br>(e.g. the Client) | PDD section<br>D.3. | It is defined in the contracts signed between <i>Lariteksas UAB</i> , <i>Vejo elektra UAB</i> and <i>Lietuvos energija AB</i> how the electric power delivered to the grid should be accounted for in case of the main electric power meter failure (contract clause 4.2). In that case the duplicated commercial meter is used. If the duplicated commercial meter also fails at the same time, additional control meters installed in the premises <i>Lariteksas UAB</i> and <i>Vejo elektra UAB</i> will be used. | О.К.                   |
| 4. Internal Data   |                     |  |                        |

Identifying the internal GHG data sources and ways in which the data have been collected, calculated, processed, aggregated and stored should be part of initial verification

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| to assess accuracy and reliability of the internal   | GHG data.           |  |         |
| <b>4.1.</b> Type and sources of internal data<br>Acquire information on type and source of internal GHG data, which is used in calculations of emission reductions. E.g" continuous direct measurements", "site-specific correlations", "periodic direct measurements", "use of models" and/or "use of default emissions factors".   | PDD section<br>D.4. | The following data is used:<br>1) EGy – Net electricity supplied to the grid.<br>(kWh).<br>2) EFy – default emission factor, 0,629 tCO2/MWh.   | О.К.    |
| <b>4.2. Data collection</b><br>How is data collected and processed? What<br>are the means of quantifying emissions from<br>the different data sources?   | PDD section<br>D.4. | The data are collected by a commercial onsite power metering device, which<br>is capable of registering power on two ways (produced and consumed). The<br>overall delivered and consumed power amount is divided up between<br><i>Lariteksas UAB</i> , <i>Vejo Energija UAB</i> using the formula 4:3. This is acceptable<br>because for emission reduction purposes only the total amount of delivered<br>and consumed power is needed.<br>Once per month, power dispatch confirmation documents are signed by<br><i>Lariteksas UAB</i> , <i>Vejo elektra UAB</i> and <i>Lietuvos energija AB</i> .<br>The total data of delivered electric power by <i>Lariteksas UAB</i> , <i>Vejo elektra<br/>UAB</i> are publicly available and are announced on the website of <i>LITGRID<br/>UAB</i> :<br>http://www.litgrid.eu/Sist_pasl/Content/Kilmes/ataskaitos_files/2009/Kilmes%<br>20garantijos 2009.htm | О.К.    |
| <b>4.3. Quality assurance</b><br>Does internal data collection underlie<br>sufficient quality assurance routines?  | PDD section<br>D.4. | Commercial power meter data are double-checked by 4ENERGIA project<br>manager with information from the wind farm SCADA system. This helps to<br>prevent misstatements in case of commercial meter failure.  | О.К.    |
| <b>4.4.</b> Significance and reporting risks<br>Assess the significance and reporting risks related to the different internal data sources. Potential reporting risks may be related to the calculation methods, accuracy of data sources and data collection and/or the information systems from which data is obtained. The significance of and risks associated with the data source indicate the level of verification effort required at a later stage. |                     | See Table 4 below.   | О.К.    |
| 5. External Data   |                     |  |         |

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| Especially for the data of baseline emissions the of initial verification. If it is deemed to be necessary   | nere might be a sary, an entity de | necessity to include external data sources. The access to such data and a proof<br>elivering such data should be audited.   | of data quality should be part |
| 5.1. Type and sources of external data   | PDD section<br>E.4.                | The emission factor for electricity production $(EF_{LE})$ at <i>Lietuvos elektrine</i> (Lithuanian power plant) is estimated as a fixed value 0,629 tCO2/MWh) for all the monitoring period.                   | О.К.                           |
| Acquire information on type and source of external data, which is used in calculations of emission reductions.   |                                    |   |                                |
| 5.2. Access to external data   |                                    | Not applicable, see 5.1 above.  | О.К.                           |
| How is data transferred? How can reproducibility of data set be ensured?   |                                    |   |                                |
| 5.3. Quality assurance   |                                    | Not applicable, see 5.1 above.  | О.К.                           |
| Does external data underlie any quality assurance routines?  |                                    |   |                                |
| 5.4. Data uncertainty  |                                    | Not applicable, see 5.1 above.  | О.К.                           |
| Is it possible to assess the data uncertainty<br>of external data? Are such routines included<br>in reporting procedures?  |                                    |   |                                |
| 5.5. Emergency procedures  |                                    | Not applicable, see 5.1 above.  | О.К.                           |
| Are there any procedures, which will be<br>applicable if there is no access to relevant<br>external data?  |                                    |   |                                |
| 6. Environmental and Social Indicators<br>A Monitoring Plan may comprise environmenta  | l and/or social in                 | dicators, which could be necessary to monitor for the success of the project activ  | ity.                           |
| 6.1. Implementation of measures  | PDD section<br>F.1.                | According to the national legislation, after installing the wind power park mandatory monitoring of the noise level should be undertaken.   | О.К.                           |
| A project activity may demand for the<br>installation of measures (e.g. filtering<br>systems or compensation areas) which<br>exceed the local legal requirements. A<br>check of the implementation or realization<br>of such measures should be part of the<br>initial verification. |                                    | Such monitoring was carried out by local authorities on February 2009, and<br>the conclusion was drawn that the noise level did not exceed the allowed<br>level according to the hygiene standard HN 33-1:2002. |                                |
| 6.2. Monitoring equipment  |                                    | Not applicable.   | U.K.                           |



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| Check where necessary whether the<br>required metering systems have been<br>installed. The meters have to comply with<br>appropriate quality standards applicable for<br>the used technology.  |                  |  |  |
| 6.3. Quality assurance procedures  |                  | Not applicable.  | О.К.   |
| What quality assurance procedures will be applied for such data?   |                  |  |  |
| 6.4. External data   |                  | Not applicable.  | О.К.   |
| Check the quality, reproducibility and uncertainty of external data.   |                  |  |  |
| 7. Management and Operational System<br>In order to ensure a successful operation of a<br>operational system.  | Client project a | nd the credibility and verifiability of the ERs achieved, the project must have a  | well-defined management and  |
| 7.1. Documentation   | PDD section D.4. | General requirements are provided in the PDD section D.4.<br>Power accounting procedures are standardized by legislation and contracts,  | О.К.   |
| The system should be documented by<br>manuals and instructions for all procedures<br>and routines with relevance to the quality of<br>emission reductions. The accessibility of<br>such documentations to persons working on<br>the project has to be secured. |                  | therefore, supplementary documented instructions are not necessary.  |  |
| 7.2. Qualification and training  | PDD section D.4. | There are no written procedures with requirements on qualification and the<br>need of training. In consideration of the fact that the managing director is   | FAR 1:<br>Please, provide basic JI   |
| The system should describe the<br>requirements on qualification and the need<br>of training programs for all persons working<br>on the emission reduction project.<br>Performed training programs and<br>certificates should be archived by the<br>system.     |                  | responsible for the accounting of produced electric power, there is no<br>significant risk if such kind of a procedure is missing. However, PDD section<br>D.4 has requirements that "Initial staff training will be provided by 4Energia<br>before the project starts operating and generating ERs". There is no evidence<br>that this training was provided for the project manager who is involved in<br>power accounting and control activity. | requirements training for the project manager.   |
| 7.3. Allocation of responsibilities  | PDD section D.4. | The allocation of responsibilities of the managing director is described in the monitoring plan. However, the responsibilities of the project manager are not  | FAR 2:<br>Please, document the   |
| The allocation of responsibilities should be documented in written manner.   |                  | documented.  | responsibilities of the project<br>manager which are related<br>with power accounting and<br>monitoring emission |



|  |                      |   | reduction.   |
|--|----------------------|---|--|
| 7.4. Emergency procedures  | PDD section D.3.     | See 3.11 above.   | О.К.   |
| The system should contain procedures,<br>which provide emergency concepts in case<br>of unexpected problems with data access<br>and/or data quality.   |                      |   |  |
| <b>7.5. Data archiving</b><br>The system should provide routines for the archiving of all data, which is required for verifying the project's performance in the context of consecutive verifications. |                      | There are no documented requirements for the archiving of all data which is<br>required for verifying (documents such as produced electric power reports,<br>electric power meters calibration and maintenance records, noise level<br>monitoring reports, monitoring reports).     | FAR 3:<br>Documented routines might<br>be prepared for archiving<br>data, which is required for<br>monitoring. The procedure<br>might define responsibilities<br>and the retention period for<br>the data archiving to ensure<br>that the data will be<br>available for at least two<br>years after the end of the<br>crediting period |
| <b>7.6. Monitoring report</b><br>The system includes procedures for the calculation of emission reductions and the preparation of the monitoring report.   | PDD,<br>section D.4. | It is stated in the PDD section D.4 that <i>Vejo Elektra UAB</i> in cooperation with <i>4Energia</i> are to prepare a brief annual monitoring report which will include: the information on overall project performance, emission reductions generated and comparison with targets. | О.К.   |
| 7.7. Internal audits and<br>management review<br>The system includes internal control  |                      | Since the managing director is directly involved in all monitoring and reporting activities, a formal management review does not have sense. Also see 4.3 above.  | О.К.   |
| procedures, which allow the identification and solution of problems at an early stage.   |                      |   |  |



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#### Table 2: Data Management System/Controls

The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/controls' ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table. A score is assigned as follows:

- > Full all best-practice expectations are implemented.
- > Partial a proportion of the best practice expectations is implemented
- > Limited this should be given if few or none of the system components are in place.

| Expectations for GHG data management system/controls   |         | Verifiers Comments (including Forward Action Requests)  |
|--|---------|---|
| 8. Defined organisational structure, responsibilities and competencies   |         |   |
| <b>8.1. Position and roles</b><br>Position and role of each person in the GHG data management process is<br>clearly defined and implemented, from raw data generation to submission of the<br>final data. Accountability of senior management must also be demonstrated. | Partial | Senior management (the managing director Tadas Navickas) clearly<br>demonstrated his accountability and awareness during the verification<br>process.<br>However, see FAR2 above. |
| <ul> <li>8.2. Responsibilities</li> <li>Specific monitoring and reporting tasks and responsibilities are included in job descriptions or special instructions for employees.</li> </ul>  | Full    | See 8.1 above.  |
| <b>8.3.</b> Competencies needed<br>Competencies needed for each aspect of the GHG determination process are<br>analysed. Personnel competencies are assessed and training programme<br>implemented as required.  | Full    | See 3.9, 7.2 above and FAR 1.   |
| 9. Conformance with monitoring plan  |         |   |



| Expectations for GHG data management system/controls   |      | Verifiers Comments (including Forward Action Requests)   |
|--|------|--|
| <b>9.1. Reporting procedures</b><br>Reporting procedures should reflect the monitoring plan content. Where deviations from the monitoring plan occur, the impact of this on the data is estimated and the reasons justified.                       |      | The reporting procedures are described in the monitoring plan and the PDD section D.4.   |
|  |      | Net power production is calculated as a difference between actual power<br>production and active power consumption. Differently than in the<br>Monitoring Plan in PDD net power production is not measured directly.<br>This deviation from monitoring plan is not create significant risk for<br>monitoring reliability, however, to ensure transparency of the monitoring<br>requirments, FAR 6 is issued: |
|  |      | <b>FAR 6:</b> Please define the requirements for net power production calculation in revised monitoring plan, and submit it for the determination by the accredited independent entity until the next verification .   |
|  |      | Minor mistakes have been found during verification and CAR1 is issued:   |
|  |      | <b><u>CAR1</u></b> : the data in the monitoring report are different from the data in the month dispatch document, see:  |
|  |      | <ul> <li>Active power production (kWh), December 2008 (Annex 1 and<br/>Annex 2) ,</li> </ul>   |
|  |      | - Active power consumption (kWh), October (Annex 3).   |
| 9.2. Necessary Changes   | Full | There was no necessity for changes to the monitoring plan.   |
| Necessary changes to the monitoring plan are identified and changes are integrated in local procedures as necessary.   |      |  |
| 10. Application of GHG determination methods   |      |  |
| 10.1. Methods used   | Full | The method to determine GHG emissions is clearly documented.   |
| There are documented descriptions of the methods used to determine GHG emissions and justifications for the chosen methods. If applicable, procedures for capturing emissions from non-routine or exceptional events are in place and implemented. |      |  |
| <b>10.2. Information/process flow</b><br>An information/process flow diagram, describing the entire process from raw data to reported totals is developed.   |      | The information/process flow is quite simple and is described in the, the PDD section D.3. However, CAR 2 is issued:   |
|  |      | CAR 2: verification team observes that an information/process flow diagram is not presented. Such diagram has to be added to the MR regardless its simplicity.   |

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| Expectations for GHG data management system/controls  |         | Verifiers Comments (including Forward Action Requests)  |
|---|---------|---|
| <b>10.3. Data transfer</b><br>Where data is transferred between or within systems/spreadsheets, the method<br>of transfer (automatic/manual) is highlighted - automatic links/updates are<br>implemented where possible. All assumptions and references to original data<br>sources are documented.                                     | Full    | There is no data transfer between or within systems/spreadsheets, the data from month power dispatch confirmation documents are used.   |
| <b>10.4. Data trails</b><br>Requirements for documented data trails are defined and implemented and all documentation is physically available.  | Full    | All documents with primary data are available (month power dispatch confirmation documents). Additionally, the data of produced electric power are publicly available and are announced on the website of <i>LITGRID UAB</i> .  |
| 11. Identification and maintenance of key process parameters  |         |   |
| <b>11.1. Identification of key parameters</b><br>The key physical process parameters that are critical for the determination of<br>GHG emissions (e.g. meters, sampling methods) are identified.  | Full    | Only commercial power meters are critical for the determinations, see 11.2 below.   |
| 11.2. Calibration/maintenance<br>Appropriate calibration/maintenance requirements are determined.   | Partial | It is defined in the contracts signed between Lariteksas UAB, Vejo Elektra<br>UAB and Lietuvos energija, AB that <i>Lietuvos energija, AB</i> is the owner of<br>the commercial electric power meters and therefore is responsible for the<br>calibration and maintenance.<br>Two commercial electric power meters were installed:<br>- position P-101 (commercial accounting): serial number 289132,<br>calibrated on 29 September 2005;<br>- position P-102 (duplicated commercial accounting): serial number<br>379391, calibrated on 16 August 2006.<br>The calibration status was valid during the first monitoring period, see 11.2<br>below. The calibration periodicity is 8 years according to the national<br>legislation.<br><u>FAR 4:</u><br>Identification data, calibration and maintenance dates of the electric power<br>metering devices might be included in the monitoring report. |
| 12. GHG Calculations  |         |   |
| <b>12.1. Use of estimates and default data</b><br>Where estimates or default data are used, these are validated and periodically<br>evaluated to ensure their ongoing appropriateness and accuracy, particularly<br>following changes to circumstances, equipment etc. The validation and<br>periodic evaluation of this is documented. | Full    | The default value of the emission factor has already been described in the PDD and has been confirmed in the determination report.  |



| Expectations for GHG data management system/controls  |      | Verifiers Comments (including Forward Action Requests)   |  |
|---|------|--|--|
| 12.2. Guidance on checks and reviews<br>Guidance is provided on when, where and how checks and reviews are to be<br>carried out, and what evidence needs to be documented. This includes spot<br>checks by a second person not performing the calculations over manual data<br>transfers, changes in assumptions and the overall reliability of the calculation<br>processes. |      | The amount of power delivered/consumed is controlled by responsible persons from <i>Lietuvos energija</i> , <i>UAB and VST</i> , <i>UAB</i> when power dispatch confirmation documents are signed. However, FAR 2 is issued.<br><b>FAR 5:</b> 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. |  |
| <b>12.3. Internal verification</b><br>Internal verifications include the GHG data management systems, to ensure consistent application of calculation methods.  | Full | See 12.2 above.  |  |
| <b>12.4. Internal validation</b><br>Data reported from internal departments should be validated visibly (by signature or electronically) by an employee who is able to assess the accuracy and completeness of the data. Supporting information on the data limitations, problems should also be included in the data trail.  | Full | Data reported are validated by the director signing month power dispatch reports.  |  |
| <b>12.5. Data protection measures</b><br>Data protection measures for databases/spreadsheets should be in place<br>(access restrictions and editor rights).   | Full | No databases are used.   |  |
| <b>12.6. IT systems</b><br>IT systems used for GHG monitoring and reporting should be tested and documented.  | Full | No IT systems are used for GHG monitoring and reporting.   |  |



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# Table 3: GHG calculation procedures and management control testing

| Identification of potential reporting risk                                     | Identification, assessment and testing of management controls  | Areas of residual risks   |
|--|--|---|
| Monitoring failure or data losses of the net electricity supplied to the grid. | Errors because of technical failure or insufficient calibration of the commercial power meters are possible. | The grid operator is responsible for<br>and interested in calibrating and<br>maintenance the meters according<br>to the requirements of the<br>manufacturer and legal requirements<br>to ensure reliable data.  |
|  |  | Procedures how electric power<br>should be monitored in case of<br>meter failure are clearly described.   |
|  |  | The main commercial meter (position P-101) data are simultaneously measured by another meter (position P-101D).   |
|  |  | Taking into account the information above, residual risks are low.  |
| Errors and misstatements in the monitoring report.                             | There is a possibility of errors and misstatements during emission reduction calculation process.            | Despite the fact that the monitoring<br>and calculation process is quite<br>simple, errors are misstatement are<br>possible, because this is the first<br>monitoring period and the<br>responsible personnel does not have<br>real experience for reporting. These<br>risks are managed by the verifier<br>using 100 % sampling to verify data<br>and calculations, therefore, residual<br>risks are low. |



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#### Table 4: Detailed audit testing of residual risk areas and random testing

| Areas of residual risks  | Additional verification testing performed  | Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i> )   |  |
|--|--|---|--|
| Monitoring failure of the electricity 1) Inspects                                    | ) Inspection of maintenance and calibration records.   | Responsible persons were interviewed regarding calibration status and cases of failure of the electric meters.  |  |
| 2) Inspection how procedures are operated in case of meters failure (if applicable). |  | Maintenance records and calibration records have been reviewed and valid calibration records have been delivered to all meters for all monitoring period. |  |
| Errors in calculation  | <ol> <li>Re-calculation of GHG emission reductions.</li> <li>100 % sampling to verify the electricity supplied to<br/>the grid data (declared in the monitoring report)<br/>according to the data in month reports and financial<br/>documents.</li> </ol> | Total re-calculation of GHG emission reduction has been performed. No errors or misstatements have been found in the GHG emission reduction calculation.  |  |



#### VERIFICATION REPORT

# Table 5: Resolution of Corrective Action and Clarification Requests

| Report clarifications and corrective action requests  | Reference to checklist question | Summary of project owner response   | Verification conclusion   |
|---|---------------------------------|---|---|
| <ul> <li>CAR 1:<br/>The data in the monitoring report are different from the data in the month dispatch document, see:</li> <li>Active power production (kWh), December 2008 (Annex 1 and Annex 2) ,</li> <li>Active power consumption (kWh), October (Annex 3).</li> </ul>                                 | Table 2, 9.1                    | Data misstatement was corrected in the monitoring report (version 2).                           | Correction was found acceptable.<br>This misstatement has not<br>influenced total emission reduction<br>data. Hence CAR1 is closed. |
| <b>CAR 2</b> :<br>Verification team observes that an information/process flow diagram is not presented. Such diagram has to be added to the MR regardless its simplicity.   | Table 2, 10.2                   | An information/Process flow diagram has been added in the monitoring report version 3, Annex 5. | Monitoring report version 3.2 was found acceptable, hence CAR 2 is closed.  |
| FAR 1:<br>Please, provide basic JI requirements training for the project<br>manager.  | Table 2, 7.2                    |   | This FAR will be verified during the next periodic verification.  |
| <b>FAR 2:</b><br>Please, document the responsibilities of the project manager which are related with power accounting and monitoring emission reduction.  | Table 2, 7.3                    |   | This FAR will be verified during the next periodic verification.  |
| <b>FAR 3:</b><br>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. | Table 2, 7.5                    |   | This FAR will be verified during the next periodic verification.  |
| FAR 4:<br>Identification data, calibration and maintenance dates of the<br>electric power metering devices might be included in the monitoring<br>report.   | Table 2, 11.2                   |   | This FAR will be verified during the next periodic verification.  |
| FAR 5:<br>Checks by a second person not performing the calculations over  | Table 2, 12.2                   | -   | This FAR will be verified during the next periodic verification.  |



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| Report clarifications and corrective action requests   | Reference to checklist question | Summary of project owner response | Verification conclusion  |
|--|---------------------------------|-----------------------------------|--|
| manual data transfers, changes in assumptions and the overall reliability of the calculation processes should be implemented.  |                                 |                                   |  |
| <b>FAR 6:</b> Please define the requirements for net power production calculation in revised monitoring plan, and submit it for the determination by the accredited independent entity until the next verification . | Table 2, 9.1                    | -                                 | This FAR will be verified during the next periodic verification. |



VERIFICATION REPORT

# APPENDIX B: VERIFICATION 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 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.

Tomas Paulaitis, M.Sci. (chemical engineering)

Lead verifier

Tomas Paulaitis is a lead auditor for the 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 over 10 JI projects.