

MONITORING REPORT NO.1

FOR PERIOD **13.09.2011-30.09.2012**

Wind Power Farm in Buciai and Kadariai Villages

JOINT IMPLEMENTATION PROJECT

UNFCCC No.LT2000042

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1. GENERAL INFORMATION

Project name:	Wind Power Farm in Buciai and Kadariai Villages Joint Implementation Project
Project location:	<p>Buciai and Kadariai Villages, Silale district, in the western part of Lithuania.</p> 
Project owner:	<p>UAB Lariteksas and UAB Vejo Elektra Reg. adr. Didžioji str. 25, LT-01128 Vilnius, Lithuania Address for correspondence: Šv. Ignoto str. 1, LT-01120 Vilnius, Lithuania</p>
Carbon credit purchaser:	<p>Stichting Carbon Finance (SCF), Netherlands. Emission Reduction Purchase Agreement (ERPA) as of 2010-08-31</p>

Project description :	The project involves 13,8 MW wind farm at Buciai and Kadariai (consisting of 6Siemens SWT-2.3-101 kW wind turbines). GHG emission reduction is achieved via displacement of carbon intensive electricity produced from fossil fuel sources in the Lithuanian power network. Crediting period for emission reductions: 01 January2010 – 31 December 2012. The Buciai and Kadariai wind farm was connected to the grid on 13 th of September, 2011.
Operation during monitoring period:	During the whole monitoring period Buciai and Kadariai wind farms operated with technical interruptions.10-14 of September, 2012 wind farm was disconnected from transmission grid due to grid works.

2. IMPLEMENTATION OF THE JI PROJECT

LoE issuance by host country DFP	10October, 2010
LoA issuance by investor country DFP	10 April, 2012
LoA issuance by host country DFP	15December, 2011
Determination report issuance by AIE	04May, 2012

Notes: DFP – designated focal point, LoE – Letter of Endorsement, LoA – Letter of Approval, AIE – accredited independent entity, PDD – Project design document, UNFCCC – United Nations Framework Convention on Climate Change.

3. MONITORING METHODOLOGY

Description:	<p>Monitoring is based on the procedures defined in the document “Monitoring Plan of Buciai and Kadariai Wind Power Joint Implementation Project. Version 1.0 September 30, 2012”.</p> <p>The amount of net electricity supply to the grid from the JI project is defined as the key activity to monitor.</p>
Grid connection and measuring meters:	<p>The Buciai and Kadariai wind farm connection to the Main Grid (110 kV) is established via one coupling point to Transmission System Operator (TSO) Litgrid AB.</p> <p>Monitoring is based only on metering electricity delivered to the Transmission System Operator (TSO) Litgrid AB at the 110 kV side of the 20/110 kV transformer at the commercial measurement point.</p> <p>TSO installed two bi-directional measuring meters (one serving as a backup meter) at the 20 kV side of the transformer at the grid connection point. Calibration of the measuring meters is processed according to Lithuanian legislation and standards.</p> <p>The contractual party of purchase of power generated by UAB Lariteksas and UAB Vejo Elektra is also AB Litgrid who issues monthly electricity production reports to UAB Lariteksas and UAB Vejo Elektra which form the basis for electricity sales invoices.</p> <p>Net power production is calculated as a difference between actual power production and active power consumption.</p> <p>In case of failure of commercial measuring meters, electricity production data can be retrieved also from separate power meters installed at the 20 kV side of the transformer at the grid connection point and the SCADA system of Siemens.</p> <p>Calibration of measuring meters is processed according to Lithuanian legislation and standards, and the TSO, owner of the meter is responsible for the calibration and maintenance. According to the national legislation the calibration of the meters is required every 8 years.</p> <p>The contractual party of purchase of power generated by Buciai and Kadariai wind farms are Lietuvos energija AB and Litgrid AB (purchaser of the public obligation services (POS) part).</p> <p>Additionally each turbine has separate meters which send data to Siemens SCADA database. The database data are used monthly to verify the production. It can be read any moment and real time as well.</p> <p>2011-09-20 both power meters (main commercial meter and backup meter) was exchanged to a new ones according update program by Litgrid, AB to achieve higher reliability and compatibility in their system.</p>

	<p>The main commercial meter No. 852181 has been changed to No.942689. The backup meter No. 837613 has been changed to No.942693. The exchange procedure has not affected metering process. All meters functioned properly during the period September 13, 2011 – September 30, 2012 and can therefore be properly used as basis for the calculation of achieved emission reductions.</p>
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4. ACHIEVED EMISSION REDUCTIONS

In accordance with the Monitoring Plan the formula for calculation of achieved emission reductions is the following:

$$BEy (tCO_2e) = EGy (MWh) \times EFy (tCO_2/MWh)$$

Emission reductions have been calculated in accordance with the Monitoring Plan as follows:

	<u>2011*</u>	<u>2012**</u>
<u>Project constants</u>		
Emission factor EFy, tCO ₂ /MWh	0,626	0,626
<u>Actual data</u>		
Net power production EGy, kWh, Buciai	5063173	12 535 961
Net power production EGy, kWh, Kadariai	6584640	16 295 594
Annual Emission reduction, tCO ₂ , Buciai	3 169,55	7 847,51
Annual Emission reduction, tCO ₂ , Kadariai	4 121,98	10 201,04
Total emission reduction, tCO₂e, Buciai&Kadariai	7292	18 049

* Data from 13.09.2011 to 31.12.2011

* *Data from 01.01.2012 to 30.09.2012

Buciai and Kadariai Wind Power JI Project generated **25 341tCO₂e** of emission reductions during the monitoring period 13 09 2011- 30 09 2012.

5. ANNEXES

1	Annual production report of Buciai wind farm 2011
2	Annual production report of Kadariai wind farm 2011
3	Annual production report of Buciai wind farm 2012
4	Annual production report of Kadariai wind farm 2012
5	Monitoring protocol 2008-2012
6	Internal staff training records
7	Wind speed data

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UAB Lariteksas and UAB Vejoelektra

Annex 1. Annual production report of Buciai wind farm, 2011

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January			
February			
March			
April			
May			
June			
July			
August			
September	394212	5617	388595
October	1236232	1223	1235009
November	1220614	3008	1217606
December	2225342	3379	2221963
Total 2011	5076400	13227	5063173

* Data according to TNO Litgrid AB power meter.

Annex 2. Annual production report of Kadariai wind farm, 2011

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January			
February			
March			
April			
May			
June			
July			
August			
September	512440	4321	508119
October	1606988	1590	1605398
November	1586685	3911	1582774
December	2892741	4392	2888349
Total 2011	6598854	14214	6584640

* Data according to TNO Litgrid AB power meter.

Annex 3. Annual production report of Buciai wind farm, 2012

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January	1841962	1886	1840076
February	1854257	1994	1852263
March	1688557	1258	1 687 299
April	1619286	1361	1617925
May	1188117	1585	1186532
June	1105171	3199	1101972
July	946992	2147	944845
August	1141870	3008	1138862
September	1166378	191	1 166 187
October			
November			
December			
Total 2012	12 552 590	16 629	12 535 961

* Data according to TNO Litgrid AB power meter.

Annex 4. Annual production report of Kadariai wind farm, 2012

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January	2394382	2451	2391931
February	2410363	2592	2407771
March	2194968	1636	2 193 332
April	2104922	1769	2103153
May	1544443	2061	1542382
June	1436621	4158	1432463
July	1231002	2791	1228211
August	1484325	3909	1480416
September	1516183	248	1 515 935
October			
November			
December			
Total 2012	16 317 209	21 615	16 295 594

* Data according to TNO Litgrid AB power meter.

Annex 5. Monitoring Protocol 2011-2012

	<u>2011*</u>	<u>2012**</u>
<u>Project constants</u>		
Emission factor EFy, tCO2/MWh	0.626	0.626
<u>Actual data</u>		
Net power generation EGy, kWh, Buciai	5063173	12 535 961
Net power generation EGy, kWh, Kadariai	6584640	16 295 594
Annual Emission reduction, tCO2, Buciai	3169,55	7 847,51
Annual Emission reduction, tCO2, Kadariai	4121,98	10 201,04
Total emission reduction, tCO2e, Buciai and Kadariai	7291,53	18 048,55
Total emission reduction, tCO2e, Buciai and Kadariai	7292	25 341

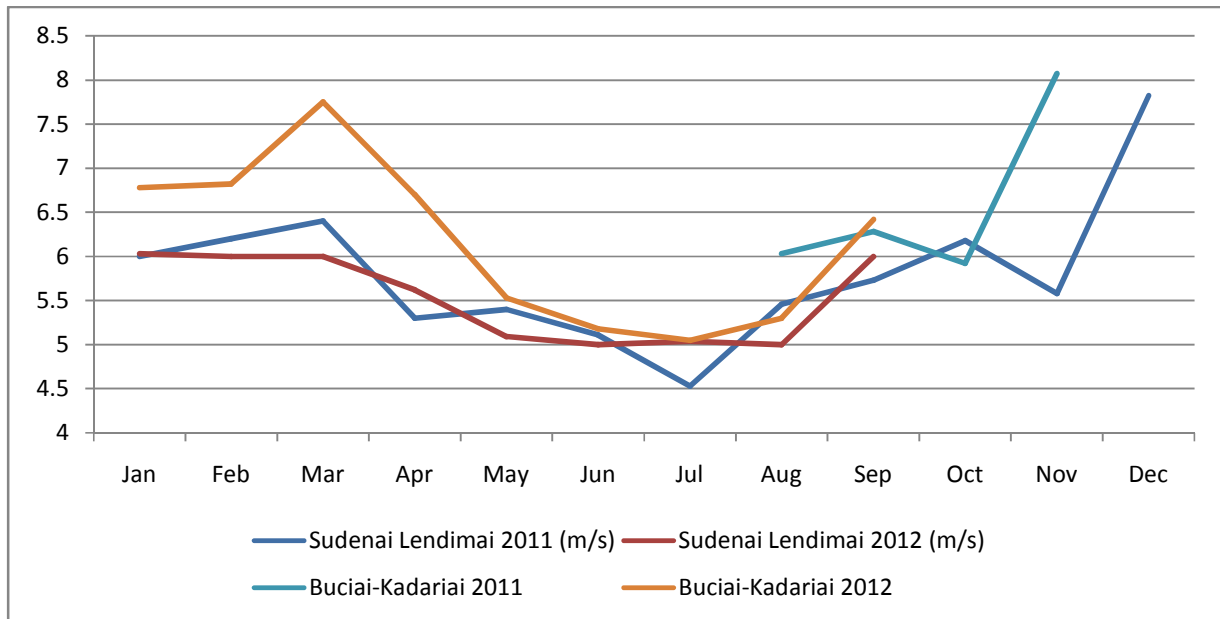
* Data from 13.09.2011 to 31.12.2011

**Data from 01.01.2012 to 30.09.2012

Annex 6. Internal staff trainings during the monitoring period

Date	Training by	Participants	Topic
December 2011	Hannu Lamp, 4energia JI consultant	Vaida Timinskaite, 4energia UAB Project Assistant	Introduction to requirements related to monitoring and verification for JI project. Basis of monitoring procedure as defined in project PDD. Preparation of Monitoring Report for 2011.
September 2012	Vaida Timiskaite, Project assistant	Indre Budiene 4energia UAB Administrator	Introduction to requirements related to monitoring and verification for JI project. Preparation of Monitoring Report for 2012.

Annex 7. Wind speed data



* Data from other wind park (Sudenai Lendimai) WIND TURBINE SCADA.
Buciai-Kadariai data from Buciai-Kadariai WIND TURBINE SCADA.