

MONITORING REPORT NO.2

FOR PERIOD **01.10.2012-31.12.2012**

Wind Power Farm in Buciai and Kadariai Villages

JOINT IMPLEMENTATION PROJECT

UNFCCC No.LT2000042

PREPARED BY:

4ENERGIA, UAB

Sv. Ignoto str. 1,
LT-01120Vilnius,
Lithuania

Tel: +370685 21249


E-mail: tadas.navickas@4energia.ee

CEO Tadas Navickas

Table of contents

1. GENERAL INFORMATION	3
2. IMPLEMENTATION OF THE JI PROJECT	4
3. MONITORING METHODOLOGY	5
4. ACHIEVED EMISSION REDUCTIONS	6
5. ANNEXES	7
Annex 1. Annual production report of Buciai-Kadariai wind farm, 2012.....	8
Annex 2. Monitoring Protocol 2011-2012.....	8
Annex 3. Internal staff trainingsduring the monitoring period	9

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 Silales vėjo elektra Reg. adr. Didžioji str. 25, LT-01128 Vilnius, Lithuania Address for correspondence: Šv. Ignoto str. 1, LT-01120 Vilnius, Lithuania</p> <p>On 20th of December 2012, the reorganization of UAB „Vėjo elektra“ and UAB „Lariteksas“ was finished. After the reorganization all the assets, rights and obligations under the transactions of Wind Power Farm in Buciai-Kadariai villiages of the mentioned companies have been transferred to UAB „Šilalės vėjo elektra“.</p>

Carbon credit purchaser:	Stichting Carbon Finance (SCF), Netherlands. Emission Reduction Purchase Agreement (ERPA) as of 2010-08-31
Project description:	The project involves 13,8 MW wind farm at Buciai and Kadariai (consisting of 6 Siemens 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 January 2010 – 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	10 October, 2010
LoA issuance by investor country DFP	10 April, 2012
LoA issuance by host country DFP	15 December, 2011
Determination report issuance by AIE	04 May, 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 Silales vejo elektra is also AB Litgrid who issues monthly electricity production reports to UAB Silales 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 monitoring period 2012 and can therefore be properly used as basis for the calculation of achieved emission reductions.</p>
--	---

4. ACHIEVED EMISSION REDUCTIONS

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

$$BEy (tCO2e) = EGy (MWh) \times EFy (tCO2/MWh)$$

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

	<u>2012*</u>
<u>Project constants</u>	
Emission factor EFy, tCO2/MWh	0,626
<u>Actual data</u>	
Net power production EGy, kWh, Buciai-Kadariai	10 091 503
Annual Emission reduction, tCO2, Buciai-Kadariai	6 317,28
Total emission reduction, tCO2e, Buciai&Kadariai	6 317

* Data from 01.10.2012 to 31.12.2012

Buciai and Kadariai Wind Power JI Project generated **6 317 tCO2e** of emission reductions during the monitoring period 01 10 2012- 31 12 2012.

5. ANNEXES

1	Annual production report of Buciiai-kadariai wind farm 2012
2	Monitoring protocol 2011-2012
3	Internal staff training records

Tadas Navickas
Managing Director
UAB Silales vejo elektra

Annex 1. Annual production report of Buciai-Kadariai wind farm, 2012

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January	-	-	-
February	-	-	-
March	-	-	-
April	-	-	-
May	-	-	-
June	-	-	-
July	-	-	-
August	-	-	-
September	-	-	-
October	2 786 006	5 220	2 780 786
November	3 343 807	3 083	3 340 724
December	3 980 398	10 405	3 969 993
Total 2011	10 110 211	18 708	10 091 503

* Data according to TNO Litgrid AB power meter.

Annex 2. Monitoring Protocol 2011-2012

	<u>2011*</u>	<u>2012**</u>	<u>2012***</u>
<u>Project constants</u>			
Emission factor EF _y , tCO ₂ /MWh	0,626	0,626	0,626
<u>Actual data</u>			
Net power generation E _{Gy} , kWh, Buciai	5063173	12 535 961	4 387 785
Net power generation E _{Gy} , kWh, Kadariai	6584640	16 295 594	5 703 718
Annual Emission reduction, tCO ₂ , Buciai	3169,55	7 847,51	2746,753
Annual Emission reduction, tCO ₂ , Kadariai	4121,98	10 201,04	3570,527
Total emission reduction, tCO₂e, Buciai and Kadariai	7291,53	18 048,55	6 317
Cumulative emission reduction, tCO₂e, Buciai and Kadariai	7292	25 341	31 658

* Data from 13.09.2011 to 31.12.2011

** Data from 01.01.2012 to 30.09.2012

*** Data from 01.10.2012 to 31.12.2012

Annex 3. 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 Timinskaite, Project assistant	Indre Budiene 4energia UAB Administrator	Introduction to requirements related to monitoring and verification for JI project. Preparation of Monitoring Report for 2012.