

MONITORING REPORT NO. 1

FOR PERIOD **01.01.2010-31.12.2011**

MOCKIAI WIND POWER

JOINT IMPLEMENTATION PROJECT

UNFCCC No. LT2000031

PREPARED BY:

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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 Mockiai wind farm, 2010	8
Annex 2. Annual production report of Mockiai wind farm, 2011	8
Annex 3. Monitoring Protocol 2010-2012.....	9
Annex 4. Internal staff trainings during the monitoring period	10
Annex 5. Wind speed data	11

1. GENERAL INFORMATION

Project name:	Mockiai Wind Power Joint Implementation Project
Project location:	Mockiai village, Silute district, Klaipeda county at the western part of Lithuania.
	
Project owner:	<p>UAB Iverneta 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 31 August 2010.</p>
Project description:	<p>The project involves 12 MW wind farm at Mockiai (consisting of 6 Enercon E82 2000 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</p>
Operation during monitoring period:	<p>During the whole monitoring period Mockiai wind farms operated without major technical interruptions.</p>

2. IMPLEMENTATION OF THE JI PROJECT

LoE issuance by host country DFP	8 May, 2007
LoA issuance by investor country DFP	7 March, 2011
LoA issuance by host country DFP	10 September, 2010
Determination report issuance by AIE	30 May, 2011

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 Mockiai Wind Power Joint Implementation Project. Version 1.0 June 20, 2011”.</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 Mockiai wind farm connection to the Main Grid (35 kV) is established via one coupling point to the distribution network operator (DNO) Lesto AB.</p> <p>Monitoring is based only on metering electricity delivered to the distribution network operator (DNO) Lesto AB at the 35 kV side of the 20/35 kV transformer at the commercial measurement point.</p> <p>DNO will install two bi-directional measuring meters (one serving as a backup meter). Calibration of the measuring meters is processed according to Lithuanian legislation and standards. Both measuring meters are connected to the remote monitoring system of DNO.</p> <p>UAB Iverneta will further install a separate power meters at the 20 kV side of the transformer at the grid connection point. The power meters will be periodically tested and calibrated.</p> <p>The contractual party of purchase of power generated by UAB Iverneta is also AB Lesto who issues monthly electricity production reports to UAB Iverneta 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 both 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 Enercon.</p> <p>Calibration of measuring meters is processed according to Lithuanian legislation and standards, and the DNO, owner of the meters is responsible for the calibration and maintenance. According to the national legislation the calibration of the meters is required every 8 years.</p> <p>No meters have been changed and all meters functioned properly during the period January 1, 2010 – December 31, 2011 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:

$$ER_y (tCO_2e) = EG_y (MWh) \times EF_y (tCO_2/MWh)$$

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

	<u>2010</u>	<u>2011</u>
<u>Project constants</u>		
Emission factor EF _y , tCO ₂ /MWh	0,654	0,654
<u>Actual data</u>		
Net power generation EG _y , kWh, Mockiai	10 715 045	39 433 220
Annual Emission reduction, tCO ₂ , Mockiai	7007,639	25789,325
Total annual emission reduction, tCO₂e	7008	25789
Total cumulative emission reductions, tCO₂e	7008	32797

According to PDD it was planned that total net power production of Mockiai park for year 2011 would be 33,196 MWh, but by fact it is 39,433 MWh. This difference could be explained by increase in expected wind speed in Lithuania in 2011 comparing to data of the past years. Wind speed data is illustrated in Annex 5.

Mockiai Wind Power JI Project generated **32 797 tCO₂e** of emission reductions during the monitoring period of year 2010-2011.

5. ANNEXES

1	Annual production report of Mockiai wind farm 2010
2	Annual production report of Mockiai wind farm 2011
3	Monitoring protocol 2010-2012
4	Internal staff training records
5	Wind speed data

Tadas Navickas
Managing Director
UAB Lariteksas and UAB Vejo elektra

Annex 1. Annual production report of Mockiai wind farm, 2010

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	26 417	-26 417
July	0	5 925	-5 925
August	0	7 604	-7 604
September	1 787 903	543	1 787 360
October	3 018 405	1 290	3 017 115
November	2 906 987	431	2 906 556
December	3 050 175	6 215	3 043 960
Total 2010	10 763 470	48 425	10 715 045

* Data according to DNO Lesto AB power meter.

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

	Actual power production (kWh)*	Active power consumption (kWh)*	Net power production (kWh)
January	3 546 434	613	3 545 821
February	4 039 803	1 169	4 038 634
March	4 107 729	1 378	4 106 351
April	2 545 036	1 343	2 543 693
May	2 531 461	960	2 530 501
June	2 376 698	418	2 376 280
July	1 615 412	1 481	1 613 931
August	2 809 732	1 144	2 808 588
September	3 172 221	647	3 171 574
October	3 981 342	814	3 980 528
November	3 017 486	1 669	3 015 817
December	5 706 682	5 180	5 701 502
Total 2011	39 450 036	16 816	39 433 220

* Data according to DNO Lesto AB power meter.

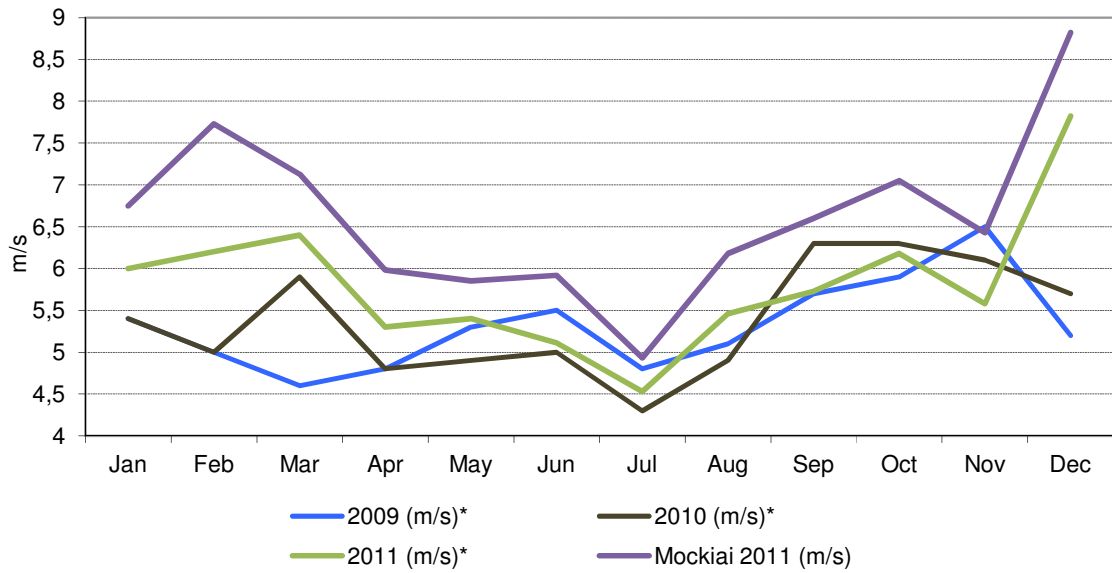
Annex 3. Monitoring Protocol 2010-2012

	<u>2010</u>	<u>2011</u>	<u>2012</u>
<u>Project constants</u>			
Emission factor EFy, tCO2/MWh	0,654	0,654	0,654
<u>Actual data</u>			
Net power generation EGy, kWh	10 715 045	39 433 220	
Annual Emission reduction, tCO2	7007,639	25789,326	
Total emission reduction, tCO2e	7008	25 789	
Cumulative emission reduction of the JI project, tCO2e	7008	32 797	

Annex 4. Internal staff trainings during the monitoring period

Date	Training by	Participants	Topic
July 2010	Hannu Lamp, 4energia JI consultant	Tadas Navickas, 4energia UAB Managing Director Julius Mikalauskas, 4energia UAB Project Manager	Preparation of improved Monitoring Plan on basis of monitoring procedure as defined in project PDD and on basis of FARs as stated in verification report of BV.
January 2011	Julius Mikalauskas, Project Manager	Ieva Vaisvilas, 4energia UAB Project Assistant	Introduction to requirements related to monitoring and verification for JI project. Produced electric power accounting and control.
February 2011	Hannu Lamp, 4energia JI Consultant	Ieva Vaisvilas, 4energia UAB Project Assistant	Preparation of Monitoring Report for 2010.
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.

Annex 5. Wind speed data



* Data from other wind park (Sudenai Lendimai) WIND TURBINE SCADA.
Mockiai data from Mockiai WIND TURBINE SCADA.