PAKRUOJO WIND POWER PARK PROJECT

MONITORING REPORT NO.1

FOR PERIOD 01.10.2010-31.12.2011

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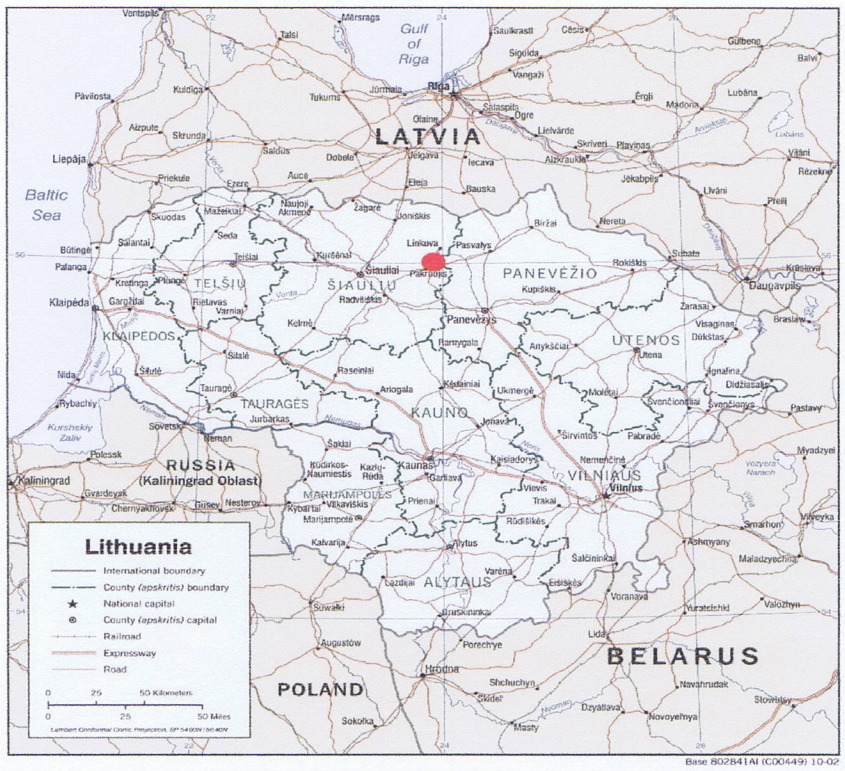
1. GENERAL INFORMATION

Project name	Pakruojo wind power park project
UNFCCC No.	0229
ITL project ID	LT2000029
Type of project	Small
Sectoral scope	Energy industries (renewable/non-renewable sources)
Project location	Pakruojo district, near village Akmenelio 
Host parties	Dolomitas AB (Lithuania)
Investor parties	Ecocom BG LTD (the Netherlands)
Project description	The project includes installation of 3 units of Enercon E-82 type (2MW each) wind turbines manufactured by German company Enercon GmbH. The total wind park capacity – 6,0 MW. The wind power park is connected to 35 kV power line. An existing transformer substation with incoming voltage of 10 kV, outgoing voltage of 35 kV was used for this purpose.

2. IMPLEMENTATION OF THE JI PROJECT

LoE issuance by host country DFP	06 Nov 09
PDD publication on UNFCCC website	09 Jun 10-08 Jul 10
LoA issuance by host country DFP	26 Oct 10
LoA issuance by investor country DFP	22 Dec 10
Determination report issuance by AIE	27 Jan 11
Final Determination on UNFCCC website	17 Mar 11

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

Monitoring period	01 Oct 10 – 31 Dec 11
Methodology description	JI Project use own methodology (not CDM approved). Methodology is based on procedures defined in Section D of the project PDD. The amount of net electricity supply to the grid from JI project is defined as key activity to monitor.

4. MONITORING EQUIPMENT AND ITS CALIBRATION

Monitoring equipment	Wind power park operations are controlled by 2 meters. The both meters are commercial (main and duplicate). All meters are connected to SCADA system and monitored remotely. Second commercial meter is necessary in the case of main commercial meter's failure. Control meter indicate commercial meter's deviations and helps evaluate energy consumption for own purposes (difference between generated and supplied to the grid values). All metered data is double checked by receipts of electricity sales with SCADA system as backup.
Calibration/maintenance of energy meters	Commercial power meter together with control meters were installed by AB Lesto, national distribution grid operator which buys electricity from the wind power park. The meters belong to AB Lesto. Power meters as well as current and voltage transformers are calibrated once every 8 years.
Deviations	During all monitoring period wind power park operated without major technical interruptions.

Monitoring equipment technical data

Energy meter	T-101	T-101/D
Purpose	Commercial meter	Duplicate-commercial meter
Producer	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"
Type	EPQS 124.21.14	EPQS 311.01.534
Measurement range	3x57,7/100V; 1(6)A	3x57,7/100V; 5(6,25)A
Accuracy class	0,2s	0,2s
Serial number	776245	75988
Metrological test date	13.04.2010	18.05.2010
Breakdowns (if any)	-	-

All meters functioned properly during monitoring period and therefore can be used as basis for proper achieved emission reduction calculations.

5. POWER PRODUCTION

Net project production during year 2010

Month	Power supplied to the grid, kWh*	Power consumed from the grid, kWh*	Net power production, kWh
Oct	1.373.302	291	1.373.011
Nov	1.164.116	760	1.163.356
Dec	1.077.391	6.480	1.070.911
Total:	**3.614.809**	**7.531**	**3.607.278**

* data of AB Lesto

Net project production during year 2011

Month	Power supplied to the grid, kWh*	Power consumed from the grid, kWh*	Net power production, kWh
Jan	1.401.365	2.613	1.398.752
Feb	1.476.173	915	1.475.258
Mar	1.973.175	615	1.972.560
Apr	1.230.783	977	1.229.806
May	1.138.777	700	1.138.077
Jun	862.606	879	861.727
Jul	611.077	1.230	609.847
Aug	552.859	942	551.917
Sep	1.191.242	352	1.190.890
Oct	1.454.375	536	1.453.839
Nov	1.273.024	631	1.272.393
Dec	2.186.940	654	2.186.286
Total:	**15.352.396**	**11.044**	**15.341.352**

* data of AB Lesto

6. CALCULATION OF EMISSION REDUCTIONS

In accordance to Monitoring plan described in the Project PDD the following formula is used to calculate Project emission reductions:

$$ER = E_{VP} \times EF_{GRID}$$

Where:
ER - emission reductions, tCO2
E_{VP} – net power dispatched to the grid from Pakruojo wind power park project (difference between supplied into grid power and consumed from the grid power), kWh
EF_{GRID} – emission factor for power production in Lithuania, 0,626 tCO2/MWh

$$E_{VP} = Esup - Econ$$

Where:
Esup = Electricity supplied to the grid by the project during period X (MWh)
Econ = Electricity consumed from the grid by the project during period X (MWh)

	2010	2011	Total
Fixed data			
Emission factor for power production at Lietuvos elektrine (EF_{GRID}), tCO2/MWh	0,626	0,626	
Monitored data			
Net power generation (E_{VP}), MWh	3.607,28	15.341,35	18.948,63
Calculated emission reductions (ER), tCO2e	**2.258**	**9.604**	**11.862**

Pakruojo wind power park project generated 11.862 tCO2e of emission reductions during the monitoring period Oct 2010- Dec 2011.

In accordance to Monitoring plan completed project's monitoring form is presented in Annex 2.

ANNEXES

ANNEXE 1 – Monitoring form

ANNEX 1

YEAR: 2010

Month	Power dispatch confirmation document No.	Date of issuance of power dispatch confirmation document	Power supplied to the grid (Esup), MWh	Power consumed from the grid (Econ), MWh	Net annual power production (E_{VP}), MWh	Amount of Emission Reduction (ER), tCO_2e	Name of the person in charge	Signature
October	Nr.1001525	2010.10.29	1.373.302	291	1.373.011	860	V.Ponelis	
November	Nr.1001659	2010.11.30	1.164.116	760	1.163.356	728	V.Ponelis	
December	Nr.1001693	2010.12.31	1.077.391	6.480	1.070.911	670	V.Ponelis	
Total:			**3.614.809**	**7.531**	**3.607.278**	**2.258**		

ER = E_{VP} x 0,626
E_{VP} = Esup-Econ

YEAR: 2011

Month	Power dispatch confirmation document No.	Date of issuance of power dispatch confirmation document	Power supplied to the grid (Esup), MWh	Power consumed from the grid (Econ), MWh	Net annual power production (E_{VP}), MWh	Amount of Emission Reduction (ER), tCO_2e	Name of the person in charge	Signature
January	Nr.1001726	2011.01.31	1.401.365	2.613	1.398.752	876	V.Ponelis	
February	Nr.1001762	2011.02.28	1.476.173	915	1.475.258	924	V.Ponelis	
March	Nr.1001804	2011.03.31	1.973.175	615	1.972.560	1.235	V.Ponelis	
April	Nr.1001919	2011.04.29	1.230.783	977	1.229.806	770	V.Ponelis	
May	Nr.1002112	2011.05.31	1.138.777	700	1.138.077	712	V.Ponelis	
June	Nr.1002344	2011.06.30	862.606	879	861.727	539	V.Ponelis	
July	Nr.1002529	2011.07.29	611.077	1.230	609.847	382	V.Ponelis	
August	Nr.1002697	2011.08.31	552.859	942	551.917	346	V.Ponelis	
September	Nr.1002919	2011.09.30	1.191.242	352	1.190.890	745	V.Ponelis	
October	Nr.1003052	2011.10.28	1.454.375	536	1.453.839	910	V.Ponelis	
November	Nr.1003164	2011.11.30	1.273.024	631	1.272.393	797	V.Ponelis	
December	Nr.1003206	2011.12.30	2.186.940	654	2.186.286	1.369	V.Ponelis	
Total:			**15.352.396**	**11.044**	**15.341.352**	**9.604**		

ER = E_{VP} x 0,626
E_{VP} = Esup-Econ