

KREIVENAI-III WIND POWER PARK PROJECT

MONITORING REPORT NO.2

FOR PERIOD 01.01.2012-31.10.2012

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1. GENERAL INFORMATION

Project name	Kreivenai-III wind power park project
UNFCCC No.	0236
ITL project ID	LT2000035
Type of project	Small
Sectoral scope	Energy industries (renewable/non-renewable sources)
Project location	Taurages district, near villages Griežpelkiai II, Žilučiai, Nemeiliai ir Kamščiai
	
Host parties	Vejo vatas, UAB (Lithuania)
Investor parties	Ecocom BG LTD (the Netherlands)
Project description	<p>The project includes installation of 7 units of Enercon E-82 type wind turbines manufactured by German company Enercon GmbH. The total wind park capacity - 15MW.</p> <p>The wind power park is connected to 110 kV power line. A transformer substation with incoming voltage of 20 kV, outgoing voltage of 110 kV and 40 MVA capacity has been installed for this purpose.</p>

2. IMPLEMENTATION OF THE JI PROJECT

LoE issuance by host country DFP	16 Jul 10
PDD publication on UNFCCC website	01 Dec 10-31 Dec 10
LoA issuance by investor country DFP	22 Dec 10
LoA issuance by host country DFP	14 Apr 11
Determination report issuance by AIE	25 Aug 11
Final Determination on UNFCCC website	18 Nov 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 Jan 12 – 31 Oct 12
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	<p>Wind power park operations are controlled by 3 meters. 2 meters are commercial (together with duplicate) and 1 meter is control. All meters are connected to SCADA system and monitored remotely.</p> <p>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).</p> <p>All metered data is double checked by receipts of electricity sales with SCADA system as backup.</p>
Calibration/maintenance of energy meters	Commercial power meter together with control meters were installed by AB Litgrid, national grid operator which buys electricity from the wind power park. The meters belong to AB Litgrid. 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	L-103
Purpose	Commercial meter	Duplicate-commercial meter	Control meter
Producer	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"
Type	EPQS 113.22.29	EPQS 113.21.29	EPQS 113.21.29
Measurement range	3x57,7/100V; 1(1,25)A	3x57,7/100V; 1(1,25)A	3x57,7/100V; 5(6,25)A
Accuracy class	0,2s	0,2s	0,2s
Serial number	837637	837638	515979
Metrological test date	08.07.2010	08.07.2010	05.08.2010
Breakdowns (if any)	Till 01.04.2012	Till 01.04.2012	Till 01.04.2012

Energy meter	T-101 new	T-101/D new	L-103 new
Purpose	Commercial meter	Duplicate-commercial meter	Control meter
Producer	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"
Type	EPQS 114.22.27	EPQS 114.22.27	EPQS 114.22.27
Measurement range	3x57,7/100V; 1(6)A	3x57,7/100V; 1(6)A	3x57,7/100V; 1(6)A
Accuracy class	0,2s	0,2s	0,2s
Serial number	942710	942708	942706
Metrological test date	04.08.2011	04.08.2011	04.08.2011
Breakdowns (if any)	From 01.04.2012	From 01.04.2012	From 01.04.2012

The commercial and control energy meters were changed by AB Litgrid as preventive maintenance (deeds No.000336-368 and No.000335-368).

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 period Jan-Oct 2012

Month	Power supplied to the grid, kWh*	Power consumed from the grid, kWh*	Net power production, kWh
Jan	4.147.710	1.265	4.146.445
Feb	3.584.223	3.829	3.580.394
Mar	4.724.914	967	4.723.947
Apr	3.194.203	1.492	3.192.711
May	2.609.677	1.270	2.608.407
Jun	2.658.631	2.671	2.655.960
Jul	2.057.635	1.661	2.055.974
Aug	2.548.547	1.289	2.547.258
Sep	3.450.670	413	3.450.257
Oct	3.051.544	1.193	3.050.351
Total:	32.027.754	16.050	32.011.704

* data of AB Litgrid

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:

$$BE = EG_{GRID} \times EF_{CO2}$$

Where:

BE - emission reductions, tCO₂

EG_{GRID} – net power dispatched to the grid from Kreivenai-III wind power park project (difference between supplied into grid power and consumed from the grid power), kWh

EF_{CO₂} – emission factor for power production in Lithuania, 0,626 tCO₂/MWh

$$EG_{GRID} = EG - EC$$

Where:

EG = Electricity supplied to the grid by the project during period X (MWh)

EC = Electricity consumed from the grid by the project during period X (MWh)

	Jan-Oct 2012	Total

<u>Fixed data</u>		
Emission factor for power production at Lietuvos elektrine (EF _{CO2}), tCO2/MWh	0,626	
<u>Monitored data</u>		
Net power generation (E _{GRID}), MWh	32.011,7	32.011,7
Calculated emission reductions (BE), tCO2e	20.039	20.039

Kreivenai-III wind power park project generated 20.039 tCO2e of emission reductions during the monitoring period Jan-Oct 2012.

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

ANNEXES

ANNEXE 1 – Monitoring form

ANNEX 1

YEAR: 2012

Month	Power dispatch confirmation document No.	Date of issuance of power dispatch confirmation document	Power supplied to the grid (EG), MWh	Power consumed from the grid (EC), MWh	Net annual power production (EG _{GRID}), MWh	Amount of Emission Reduction (BE), tCO ₂ e	Name of the person in charge	Signature
January	VJ-4/12/1	2011.02.01	4.147.710	1.265	4.146.445	2.596	E.Simutis	
February	VJ-4/12/2	2011.03.05	3.584.223	3.829	3.580.394	2.241	E.Simutis	
March	VJ-4/12/3	2011.04.03	4.724.914	967	4.723.947	2.957	E.Simutis	
April	VJ-4/12/4	2011.05.04	3.194.203	1.492	3.192.711	1.999	E.Simutis	
May	VJ-4/12/5	2011.06.04	2.609.677	1.270	2.608.407	1.633	E.Simutis	
June	VJ-4/12/6	2011.07.04	2.658.631	2.671	2.655.960	1.663	E.Simutis	
July	VJ-4/12/7	2011.08.03	2.057.635	1.661	2.055.974	1.287	E.Simutis	
August	VJ-4/12/8	2011.09.04	2.548.547	1.289	2.547.258	1.595	E.Simutis	
September	VJ-4/12/9	2011.10.02	3.450.670	413	3.450.257	2.160	E.Simutis	
October	VJ-4/12/10	2011.11.05	3.051.544	1.193	3.050.351	1.910	E.Simutis	
November								
December								
Total:			32.027.754	16.050	32.011.704	20.039		

BE = EG_{GRID} x 0,626

E_{VP} = EG-EC