GRIEZPELKIU WIND POWER PARK PROJECT

MONITORING REPORT NO.1

FOR PERIOD 01.10.2010-31.12.2011

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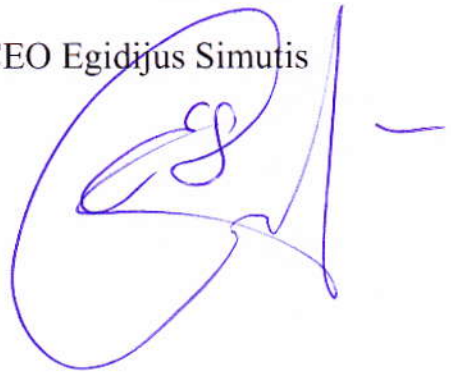

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1. GENERAL INFORMATION

Project name	Griezpelkiu wind power park project
UNFCCC No.	0200
ITL project ID	LT2000025
Type of project	Small
Sectoral scope	Energy industries (renewable/non-renewable sources)
Project location	Taurages district, Griezpelkiu village 
Host parties	Vejo gusis, UAB (Lithuania)
Investor parties	Ecocom BG, LTD (the Netherlands)
Project description	The project includes installation of 5 units of Enercon E-82 type (2MW) wind turbines manufactured by German company Enercon GmbH with total capacity 10 MW The wind power park is connected to 110 kV power line. An existing transformer substation with incoming voltage of 20 kV, outgoing voltage of 110 kV and 25 MVA capacities was used for this purpose.

2. IMPLEMENTATION OF THE JI PROJECT

LoE issuance by host country DFP	19 Feb 09
PDD publication on UNFCCC website	12 Nov 09-11 Dec 09
LoA issuance by host country DFP	19 Jun 10
LoA issuance by investor country DFP	22 Dec 10
Determination report issuance by AIE	28 Jul 10
Final Determination on UNFCCC website	14 Nov 10

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	Due to reason that Griezpelkiu Wind Power Park Project (9,13MW) and Kreivenai wind power park (20MW) are connected to the same substation with one commercial power metering device it is necessary to separate each park energy generation/consumption. According to monitoring plan description Griezpelkiu wind power park project operations are controlled by common commercial meter (excluding its duplicate) and 1 control meter. Kreivenai wind park's operations are controlled by common commercial meter (excluding its duplicate) and 2 control meters. 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 meters 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 Litgrid, national grid operator which buys electricity from the wind power parks. 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.

Griezpelkiu wind power park project monitoring equipment technical data

Energy meter	T-101	T-101/D	L-105
Purpose	Commercial meter	Duplicate-commercial meter	Control meter
Producer	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"
Type	EPQS 113.21.29	EPQS 113.21.29	EPQS 131.21.29
Measurement range	3x57,7/100V; 1(1,25)A	3x57,7/100V; 1(1,25)A	3x230/400V; 5(6,25)A
Accuracy class	0,2s	0,2s	0,2s
Serial number	649233	649235	649240
Metrological test date	11.12.2008	11.12.2008	11.12.2008
Breakdowns (if any)	-	-	-

Kreivenai wind power park monitoring equipment technical data (excluding commercial meters)

Energy meter	L-103	L-104
Purpose	Control meter	Control meter
Producer	UAB "Elgama-Elektronika"	UAB "Elgama-Elektronika"
Type	EPQS 113.21.29	EPQS 111.21.29
Measurement range	3x57,7/100V; 5(6,25)A	3x57,7/100V; 5(6,25)A
Accuracy class	0,2s	0,2s
Serial number	524226	649153
Metrological test date	12.12.2008	10.12.2008
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	0	0	0
Nov	0	0	0
Dec	383.681	722	382.959
Total:	**383.681**	**722**	**382.959**

* data of AB Litgrid

Net project production during year 2011

Month	**Power supplied to the grid, kWh***	**Power consumed from the grid, kWh***	**Net power production, kWh**
Jan	1.852.703	335	1.852.368
Feb	2.921.900	1.340	2.920.560
Mar	3.100.917	636	3.100.281
Apr	2.113.980	731	2.113.249
May	1.903.369	618	1.902.751
Jun	1.810.424	388	1.810.036
Jul	1.117.744	1.267	1.116.477
Aug	1.924.001	654	1.923.347
Sep	2.258.342	419	2.257.923
Oct	2.872.597	727	2.871.870
Nov	2.246.114	1.457	2.244.657
Dec	4.224.198	2.621	4.221.577
Total:	**28.346.289**	**11.193**	**28.335.096**

* 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:

$$ER = E_{Griez(+/-)} \times EF_{LE} \qquad [1]$$

Where:
ER – annual emission reductions, tCO2
$E_{Griez(+/-)}$ – Net annual power production at Griezpelkiu wind power park project (the difference between produced and consumed power), MWh.
EF_{LE} – emission factor for power production at Lietuvos elektrine, i.e. 0,626 tCO2/MWh

$$E_{Griez(+/-)} = E_{T101} - E_{Kreiv(+/-)} \qquad [2]$$

Where:
E_{T101} – the data of commercial power meter No.T101, i.e. net power dispatched to the grid from Griezpelkiu wind power park project (10MW) and Kreivenai wind power park (20MW), kWh
$E_{Kreiv(+/-)}$ – net power dispatched to the grid from Kreivenai wind power park, kWh

According to the power sale-purchase agreement between project owner with AB Lietuvos energija net power dispatched to the grid from each park will be recorded by 3 control meters installed on substation parallel to commercial meter

$$P = P1_{(+/-)}+P2_{(+/-)}+P3_{(+/-)} \qquad [3]$$

Where:
P – the sum of net power dispatched to the grid measured by all control meters, kWh
$P1_{(+/-)}+P2_{(+/-)}+P3_{(+/-)}$ - the data from four separate control meters on net power dispatched to the grid, kWh

Based on data of all meters AB Lietuvos energija will separate Griezpelkiu wind power park project's generation/consumption proportion from net power dispatched to the grid calculated by [4] formulae:

$$P4_{\%} = P3_{(+/-)} / P \qquad [4]$$

Where:
$P3_{\%}$ – Griezpelkiu wind power park project's energy generation proportion from total net power amount, %
$P3_{(+/-)}$ - the data of Griezpelkiu wind power park project's control meter, kWh

The factual net power dispatched to the grid from Griezpelkiu wind power park project calculated by [5] formulae:

$$E_{Griez(+/-)} = P3_{\%} \cdot E_{T101} \qquad [5]$$

	2010	2011	Total
Fixed data			
Emission factor for power production at Lietuvos elektrine (EF_{LE}), tCO2/MWh	0,626	0,626	
Monitored data			
Net power generation ($E_{Griez(+/-)}$), MWh	0,383	28.335	28.718
Calculated emission reductions (ER), tCO2e	**240**	**17.738**	**17.978**

Griezpelkiu wind power park project generated 17.978 tCO2e of emission reductions during the monitoring period Oct 2010 -Dec 2011.

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 $E_{Griez(+/-)}$, MWh	Amount of Emission Reduction (ER), tCO_2e	Name of the person in charge	Signature
October	None	None	0	0	0	0	E.Simutis	
November	None	None	0	0	0	0	E.Simutis	
December	VJ-5/10/12	2011.01.04	383.681	722	382.959	240	E.Simutis	
Total:			**383.681**	**722**	**382.959**	**240**		

$ER = E_{Griez(+/-)} \times 0{,}626$

$E_{VP} = Esup - Econ$

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 $E_{Griez(+/-)}$, MWh	Amount of Emission Reduction (ER), tCO_2e	Name of the person in charge	Signature
January	VJ-5/11/01	2011.02.02	1.852.703	335	1.852.368	1.160	E.Simutis	
February	VJ-5/11/02	2011.02.28	2.921.900	1.340	2.920.560	1.828	E.Simutis	
March	VJ-5/11/03	2011.04.04	3.100.917	636	3.100.281	1.941	E.Simutis	
April	VJ-5/11/04	2011.05.03	2.113.980	731	2.113.249	1.323	E.Simutis	
May	VJ-5/11/05	2011.06.01	1.903.369	618	1.902.751	1.191	E.Simutis	
June	VJ-5/11/06	2011.07.04	1.810.424	388	1.810.036	1.133	E.Simutis	
July	VJ-5/11/07	2011.08.01	1.117.744	1.267	1.116.477	699	E.Simutis	
August	VJ-5/11/08	2011.09.01	1.924.001	654	1.923.347	1.204	E.Simutis	
September	VJ-5/11/09	2011.10.03	2.258.342	419	2.257.923	1.413	E.Simutis	
October	VJ-5/11/10	2011.11.03	2.872.597	727	2.871.870	1.798	E.Simutis	
November	VJ-5/11/11	2011.12.05	2.246.114	1.457	2.244.657	1.405	E.Simutis	
December	VJ-5/11/12	2012.02.05	4.224.198	2.621	4.221.577	2.643	E.Simutis	
Total:			**28.346.289**	**11.193**	**28.335.096**	**17.738**		

$ER = E_{Griez(+/-)} \times 0{,}626$

$E_{VP} = Esup - Econ$