

**MONITORING REPORT FORM (CDM-MR) \***  
**Version 01 - in effect as of: 28/09/2010**

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\* as contained within the document entitled "Guidelines for completing the monitoring report form (CDM-MR)" (EB 54 meeting report, annex 34).

**MONITORING REPORT**  
**Version 01, 08/11/2011**

**CECIC Gansu Yumen Changma No.3 Wind Farm Project**  
**Reference number: 4734**  
**The 1st monitoring period (28/04/2011-29/10/2011)**

**SECTION A. General description of the project activity**

**A.1. Brief description of the project activity: >>**

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CECIC Gansu Yumen Changma No.3 Wind Farm Project (hereinafter referred as "the Project") is located in Yumen Town, Yumen City, Gansu Province, the People's Republic of China. The purpose of the Project is to generate electricity using wind power resources in the project region and to deliver to the Northwest China Power Grid (NWPG) which is predominated by connected fossil fuel fired power plants, especially coal fired plants. So the Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants in NWPG.

The Project involves the installation of 134 wind turbines with 1.5MW capacity per unit, with a total installed capacity of 201 MW. Totally 463,714 MWh of clean electricity generated by the Project are expected to be delivered to the NWPG annually.

The Project started construction on 19/09/2009. The wind turbines of the Project commissioning started on 28/01/2011.

For this monitoring period of the Project (28/04/2011 to 29/10/2011), the Project is claiming for net electricity exports to the grid by the Project of 166,436.160MWh. The grid emission factor was fixed ex-ante at 0.9180 tCO<sub>2</sub>e/MWh. Consequently, the total net emission reductions claimed in the monitoring report are 152,788 tCO<sub>2</sub>e.

**A.2. Project Participants**

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Name of Party involved (*) (host) indicates a host Party)	Private and/or public entity(ies) project participants (*) (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant (Yes/No)
P.R.China (Host)	CECIC Wind-power (Gansu) Co., Ltd.	No
Japan	Mitsubishi UFJ Morgan Stanley Securities Co.,Ltd	No
(*) In accordance with the CDM modalities and procedures, at the time of making the PDD public at the stage of validation, a Party involved may or may not have provided its approval. At the time of requesting registration, the approval by the Party(ies) involved is required.		

**A.3. Location of the project activity:**

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The Project site is located 18-31 km southwest of Yumen Town, Yumen City, Gansu Province in the People's Republic of China. It is located at Latitude from N 40° 05' 39" to N 40° 09' 52" and longitude from E 96° 46' 22" to E 96° 51' 57". The altitude of the Project site ranges from between 1690 m to 1825 m above the sea level. More details shown as follow figure 1.

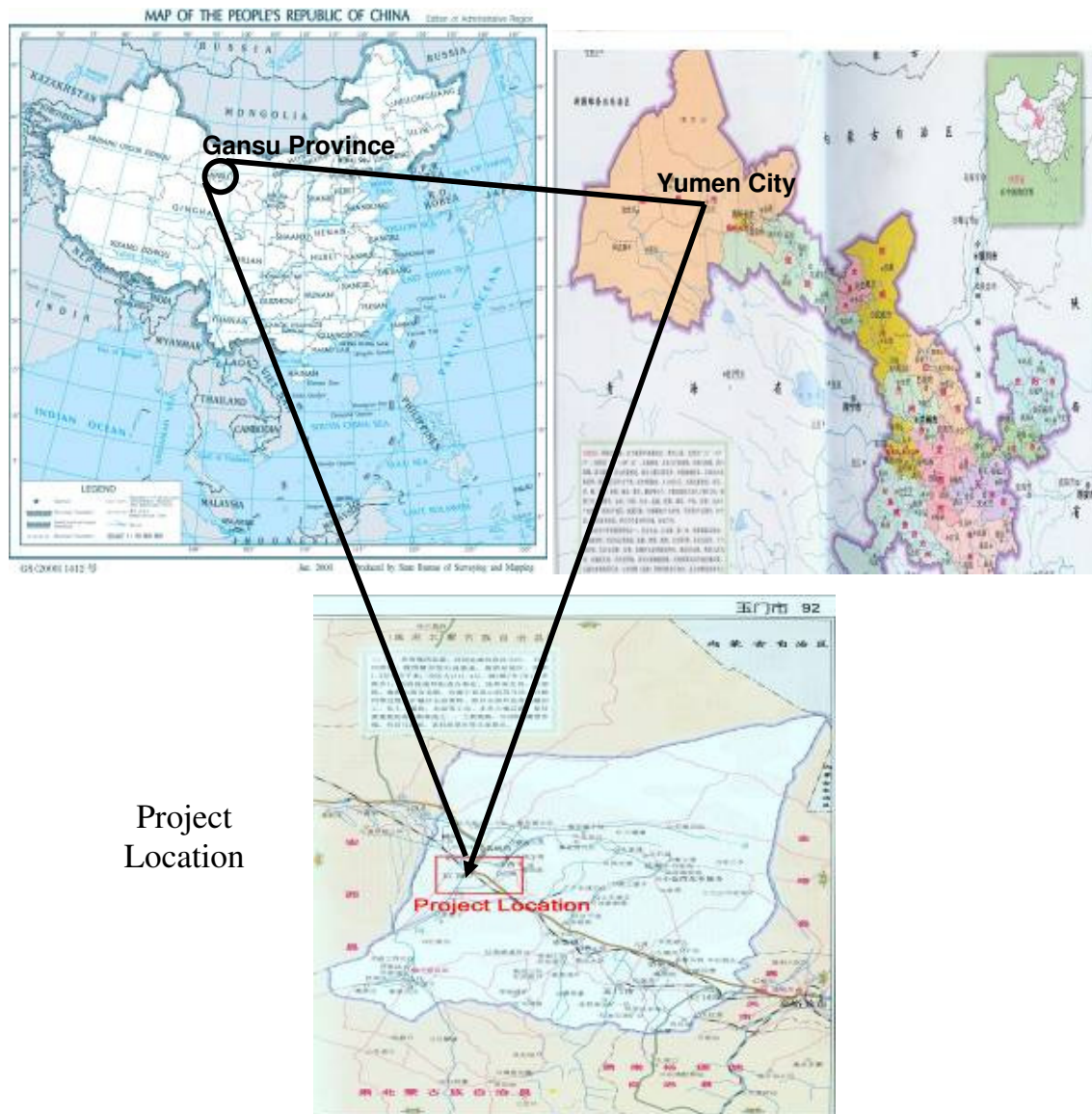


Figure1. Location of the Project

#### A.4. Technical description of the project

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Total 134 units of wind power turbine and generators with 1.5MW unit capacity each, are installed in the Project, forming 201MW of total capacity. These wind turbines are manufactured by China's Dongfang Steam Turbine Co., Ltd and the model type of these wind turbines is FD82A-1500 . The main technology parameter of this type of wind power turbine can be found at Table 1, which is in line with the specification made in the PDD.

Table 1 Technology parameter of WTGs for the Project

Key Technology Parameter	FD82A-1500/11
Rated capacity (kW)	1500
Number of unit	134
Turbine diameter (m)	82

Hub height (m)	70
Cut in wind speed (m/s)	3.0
Rated wind speed (m/s)	11
Cut out wind speed (m/s)	20.0
Wind speed limit (m/s)	52.5
Operating temperature (°C)	-20~+40
Number of blades	3
Output Voltage (V)	690
Technical lifetime (y)	20

The electricity generated by the Project will be exported to the local Yumen town grid via a newly built 35kV/330kV transformer station, which is then exported to the NWPG

**A.5. Title, reference and version of the baseline and monitoring methodology applied to the project activity:**

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- Approved consolidated baseline and monitoring methodology ACM0002: “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” (Version 12.1, Valid from 17/09/2010).

Reference: UNFCCC website: <http://cdm.unfccc.int/methodologies/PAmethodologies/approved>

**A.6. Registration date of the project activity:**

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The PDD version 10.2 dated on 20/04/2011 registered on 28/04/2011.

**A.7. Crediting period of the project activity and related information (start date and choice of crediting period):**

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The Project activity employs the renewable crediting period, and the starting date of the first crediting period (7 years) is 28/04/2011. A post-registration approval was obtained to change the crediting period from 01/07/2011 – 30/06/2018 to 28/04/2011 – 27/04/2018.

**A.8. Name of responsible person(s)/entity(ies):**

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Contact information of the persons/entities responsible for completing the monitoring report form (CDM-MR) is listed as follows:

CECEP Wind Power Incorporated Company.

Address: 12<sup>th</sup> Floor, A Building Jieneng Mansion, No.42 Xizhenmen North Street, Haidian District, Beijing, China 100082.

Mr. Shen Hongshuai. Tel: +86-10-62248705, Email: [shenhongshuai@gmail.com](mailto:shenhongshuai@gmail.com);

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Mr. Yao Xi. Tel: +86-10-62248706, Email: [yaoxi@cecwpc.cn](mailto:yaoxi@cecwpc.cn).

CECIC Wind-power (Gansu) Co., Ltd..

Address: Yuchang Road, New District of Yumem City, Gansu Province, China 735211.

Mr. Yang Shuai. Tel: +86-937-3351281, Email: [562172974@qq.com](mailto:562172974@qq.com).

## **SECTION B. Implementation of the project activity**

### **B.1. Implementation status of the project activity**

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The Project's construction was started on 19/09/2009. The first wind turbine of the Project was commissioned on 28/01/2011. The electricity generated by the Project is delivered to NWPG.

During this monitoring period, the Project has been operating without major problems. There have been no emergencies happened to the monitoring system in this monitoring period, also no events or situations that occurred during the monitoring period, which may impact the applicability of the methodology.

### **B.2. Revision of the monitoring plan**

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Not Applicable

### **B.3. Request for deviation applied to this monitoring period**

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Not Applicable

### **B.4. Notification or request of approval of changes**

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Not Applicable

## **SECTION C. Description of the monitoring system**

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The implementation of monitoring system and Management organization for the Project are fully in consistent with the description in the PDD Monitoring Plan.

### **1. Organizational structure and responsibilities**

The Project owner (CECIC Wind-power (Gansu) Co., Ltd.) established a CDM Project Management Office (PMO). The roles and responsibilities of monitoring team persons from the Project owner see as follow:

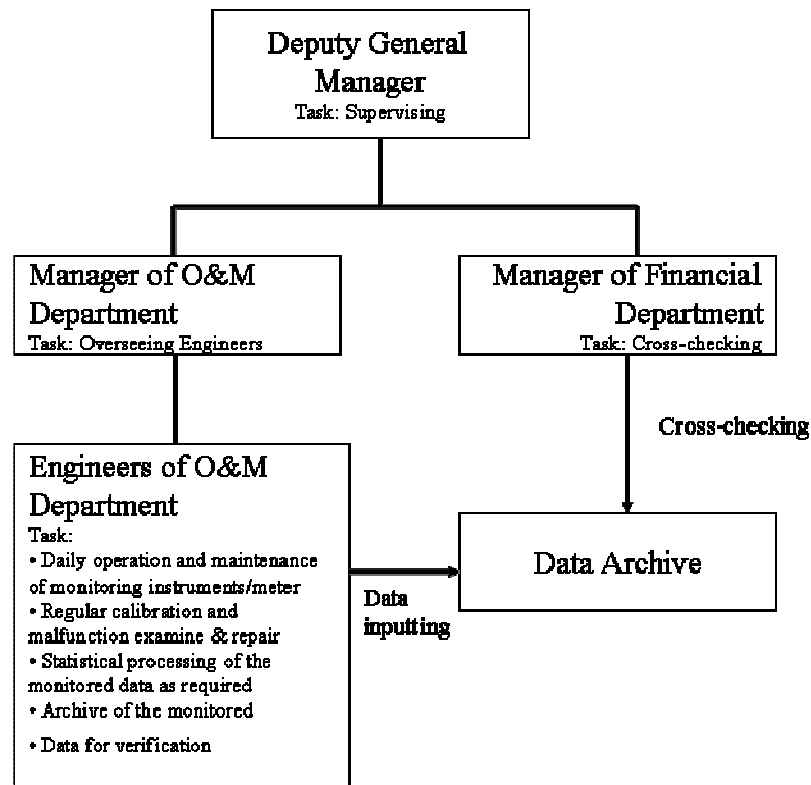
Mr. Zhao Dongsheng, Vice General Manager is responsible for operation and maintenance as well as monitoring of the Project.

Under supervision of the Vice General Manger, Operation & Maintenance Department conducts following tasks.

- Daily operation and maintenance of the monitoring instrument/meters,
- Regular calibration and malfunction examine and repair
- Statisticalprocessing of the measured data
- Achieve measured data for verification

The data was cross-checked via the sales invoices and other relevant records monthly.

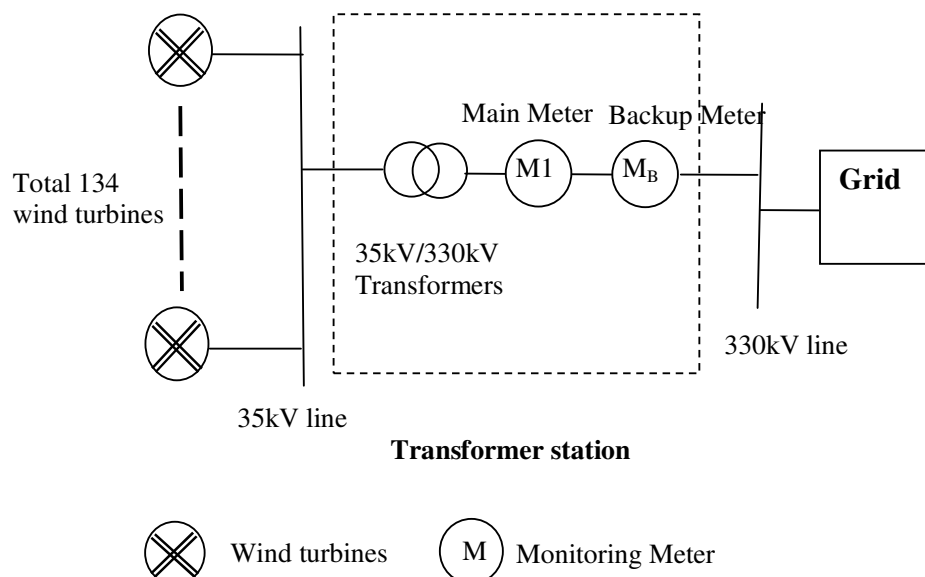
The organization structure is illustrated as follows:



## 2. Data collection and management

As described in the monitoring plan, the Project wind farm records reading monthly from the meter equipments within the Project site.

The net electricity generation of the Project was monitored through the two bi-directional meters (one is main meter, and the other is backup meter) installed at the high voltage side of 35kV/330kV booster transformer, located within the 330kV Changma West transform substation near to the Project site, recording exported to the grid by the Project and imported from the grid by the Project. The net electricity generation supplied by the Project ( $EG_{\text{facility},y}$ ) was calculated as exports minus imports. The data was monitored continuously, and the results of reading was recorded and supplied to Grid Company monthly. The monitoring points shows below:



Designated personnel of the wind farm read and record the readings of the meters mentioned above monthly. The CDM manager of the Project wind farm checked out the reported data against with the Electricity Transaction Notes (ETN) or sale receipts before archived. The meters were calibrated at least once per year. More details please refer to Section D.

All data collected as part of monitoring was archived electronically and was kept until 2 years after the end of the total crediting period of the Project.

### 3. Calibration status

The calibration status of the main meters is as follows:

<b>Monitoring Device:</b>		Main meter: 57033315 Backup meter: 57033312
<b>Third-party calibration frequency</b>		Annual
<b>Third-party calibrating party</b>		Metrological Centre of Gansu Province Electric Power Co.,Ltd
<b>Main meter</b>	<b>Most-recent calibration</b>	29/11/2010 (valid period: 29/11/2010 to 28/11/2011)
<b>Backup meter</b>	<b>Most-recent calibration</b>	29/11/2010 (valid period: 29/11/2010 to 28/11/2011)
<b>Comments</b>		The calibration frequency of the meters was in line with the requirement of the monitoring plan structured in the registered PDD.

### 4. Corrective actions

When reading error of either meter exceeds the allowable range or any inconsistency occurs, the meter should be repaired and followed by calibration by a third party in accordance with the standard, within 10 days. The grid company must be informed before the calibration and all the record should be kept by the Project owner.

When the main meter detects the error beyond the allowable range or inconsistency, the backup meter, located within the site, will be used. In case that both meters detect errors, the Project owner shall repair the meter, recalibrate, or replace, while giving the grid company sufficient notice to allow their representative to attend during any corrective activities. When this happen, the net power generated is calculated by read the backup meter. In case where both meters fail, the both parties should formulate reasonable and conservative estimation based on historical or the nearest month power generation data. Also, the Project owner should provide the evidence to testify the method is reasonable and conservative.

## SECTION D. Data and parameters

<b>D.1. Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors</b>	
<b>Data / Parameter:</b>	$EF_{grid,CM,y}$
<b>Data unit:</b>	tCO <sub>2</sub> e/MWh
<b>Description:</b>	Baseline emission factor: the combined emission factor of the project grid system.
<b>Source of data used:</b>	Source from the Section B.6 of the registered PDD for the Project.
<b>Value(s) :</b>	0.9180
<b>Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)</b>	Used for baseline emission calculations.
<b>Additional comment:</b>	The emission factor of the Project was ex-ante determined and is fixed during the first crediting period. All data and parameters had been determined at registration.

## D.2. Data and parameters monitored

Data / Parameter:	EG <sub>facility,y</sub>						
Data unit:	MWh						
Description:	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y						
Measured /Calculated /Default:	Calculated						
Source of data:	Meter reading record of onsite main meters						
Value(s) of monitored parameter:	166,436.160 MWh.						
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Used for the baseline emission calculations.						
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Serial No.	Type	Accuracy	Calibration date	Validity of the Calibration	Calibration frequency	
	57033315 Main meter	SL764 A071	0.2s	29/11/2010	28/11/2011	Annually	
	57033312 Backup meter	SL764 A071	0.2s	29/11/2010	28/11/2011	Annually	
Measuring/ Reading/ Recording frequency:	Measuring continuously/Recording monthly						
Calculation method (if applicable):	EG <sub>facility,y</sub> = EG <sub>export,y</sub> — EG <sub>import,y</sub>  EG <sub>facility,y</sub> is electricity exported to the grid by the project (EG <sub>export,y</sub> ) minus electricity imported from the grid by the project (EG <sub>import,y</sub> ).						
QA/QC procedures applied:	Monthly power exported and imported to the NWPG are cross-checked against Electricity Transaction Notes (ETNs) or sales receipts. The calibrations are done by a qualified organization at least once per year for the main meters and backup meters according to local industry standards.						

## SECTION E. Emission reductions calculation

### E.1. Baseline emissions calculation

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According to ACM0002 and the registered PDD of the Project, The baseline emission BE<sub>y</sub> during the monitoring period results from:

$$BE_y = EG_{facility,y} \times EF_{grid,CM,y}$$

$$EG_{facility,y} = EG_{export,y} - EG_{import,y}$$

Where:

BE<sub>y</sub> is the baseline emissions of the Project;

EF<sub>grid,CM,y</sub> is the combined margin baseline emission factor of the NCPG;

EG<sub>facility,y</sub> is the net electricity supplied to the grid by the Project;

EG<sub>export,y</sub> is the quantity of electricity exported to the grid by the Project;

EG<sub>import,y</sub> is the quantity of electricity imported from the grid by the Project.

The monthly electricity data is listed in following table 2:

**Table2. Calculation of the net electricity supplied to the grid by the Project**

Period	Electricity exported to the grid by the Project $EG_{\text{export},y}$ (MWh)	Electricity imported from the grid by the Project $EG_{\text{import},y}$ (MWh)	Net electricity supplied to the grid by the Project $EG_{\text{facility},y}$ (MWh)
	<b>A</b>	<b>B *</b>	$EG_{\text{export},y}$ minus $EG_{\text{import},y}$ <b>C=A-B</b>
28/04/2011-29/05/2011	24,311.760	50.160	24,261.600
30/05/2011-28/06/2011	25,481.280	23.760	25,457.520
29/06/2011-29/07/2011	22,434.720	29.040	22,405.680
30/07/2011-29/08/2011	31,120.320	47.520	31,072.800
30/08/2011-28/09/2011	40,492.320	39.600	40,452.720
29/09/2011-29/10/2011	22,830.720	44.880	22,785.840
<b>Total</b>	<b>166,671.120</b>	<b>234.960</b>	<b>166,436.160</b>

Note: \* For a conservative calculation, the data in the column of electricity imported from the grid by the Project ( $EG_{\text{import},y}$ ) is the total amount of electricity imported from the grid by the Project from 30/03/2011 to 29/10/2011.

The data in this table has been double checked with the Electricity Transaction Notes (ETNs).

The baseline emission during this monitoring period calculated as following:

$$\begin{aligned}
 BE_y &= EG_{\text{facility},y} \times EF_{\text{grid,CM},y} \\
 &= 166,436.160 \text{ MWh} \times 0.9180 \text{ tCO}_2\text{e/MWh} \\
 &= 152,788 \text{ tCO}_2\text{e}
 \end{aligned}$$

#### **E.2. Project emissions calculation**

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Project emission ( $PE_y$ ) is 0 tCO<sub>2</sub>e as per the registered PDD.

#### **E.3. Leakage calculation**

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Leakage ( $L_y$ ) is 0 tCO<sub>2</sub>e as per the registered PDD.

#### **E.4. Emission reductions calculation / table**

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The total Emission Reduction ( $ER_y$ ) during this monitoring period is calculated as follow:

$$ER_y = BE_y - PE_y - L_y = 152,788 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} = 152,788 \text{ tCO}_2\text{e}$$

#### **E.5. Comparison of actual emission reductions with estimates in the CDM-PDD**

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The estimated annual emission reduction in the registered PDD is 425,689 tCO<sub>2</sub>e which is equals to 1,166.2712 tCO<sub>2</sub>e per day. So, the estimated emission reduction is 215,760 tCO<sub>2</sub>e in 185 days (total days of this monitoring period) based on the registered PDD.

Item	Values applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period
Emission reductions (tCO <sub>2</sub> e)	215,760 tCO <sub>2</sub> e <sup>1</sup>	152,788 tCO <sub>2</sub> e

#### E.6. Remarks on difference from estimated value in the PDD

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The actual emission reductions during this monitoring period are 152,788 tCO<sub>2</sub>e, which is less than the estimated value in the registered PDD. There is no any significant increase compared with the estimated emission reduction in the registered PDD.

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#### History of the Monitoring Report

Version	Date	Nature of revision
01	08/11/2011	Initial adoption.

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<sup>1</sup> 215,760 tCO<sub>2</sub>e= 425,689 tCO<sub>2</sub>e\*185/365.

#### History of the document

Version	Date	Nature of revision
01	EB 54, Annex 34 28 May 2010	Initial adoption.
<b>Decision Class:</b> Regulatory <b>Document Type:</b> Guideline, Form <b>Business Function:</b> Issuance		

\* as contained within the document entitled "Guidelines for completing the monitoring report form (CDM-MR)" (EB 54 meeting report, annex 34).