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

CONTENTS

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

MONITORING REPORT
Version number 01 and date 19/04/2011

Jilin Shuangliao 2nd Phase Wind Power Project
Reference number: 2685
The second monitoring period (25/09/2010-24/04/2011)

SECTION A. General description of the project activity

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

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Jilin Shuangliao 2nd Phase Wind Power Project is located about 51km to the north of Shuangliao city, southwest of Jilin Province, China. The project involves the installation of 33 turbines, each of which has a rated output of 1500kW, providing a total capacity of 49.5MW.

The annual on-grid generation of the project will be 103,047MWh. As a result, annual 117,865 tones of CO_2 emission reductions will be achieved by replacing equivalent electricity generated by Northeast China Power Grid, which is dominated by thermal power plants.

Relevant dates for the project activity are listed as below:

Starting date of the construction	31/08/2008
Grid connected date of all wind turbines	20/04/2009

The project has been registered as a CDM project on 03/03/2010 with the CDM registration reference number of 2685.

During the second monitoring period (25/09/2010-24/04/2011).The project has generated the total electricity supply of 64,995MWh and achieved 74,341 tones of CO_2e emission reduction by replacing electricity generated by Northeast China Power Grid dominated by fossil fuel fired power plants.

A.2. Project Participants

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Name of Party involved	Private and/or public entity(ies) project participants	Kindly indicate if the Party involved wishes to be considered as project participant
People's Republic of China (host)	Datang Jilin Resourceful New Energy Power Generation Company Limited (project owner)	No
Sweden	Swedish Energy Agency	No
Sweden	Carbon Asset Management Sweden AB	No

A.3. Location of the project activity:

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The project site is located about 51km to the north of Shuangliao City, southwest of Jilin Province. The specific location is between east longitude 123°27′30″- 123°30′00″ and north latitude 43°54′23″- 43°57′15″, with the elevation of 133.2-142.2 meters. All the area within the wind farm is covered with degraded grassland, and has flat topography. Figure A-1 and Figure A-2 show the location of the project.

Figure A-1: Location of Jilin Province in China

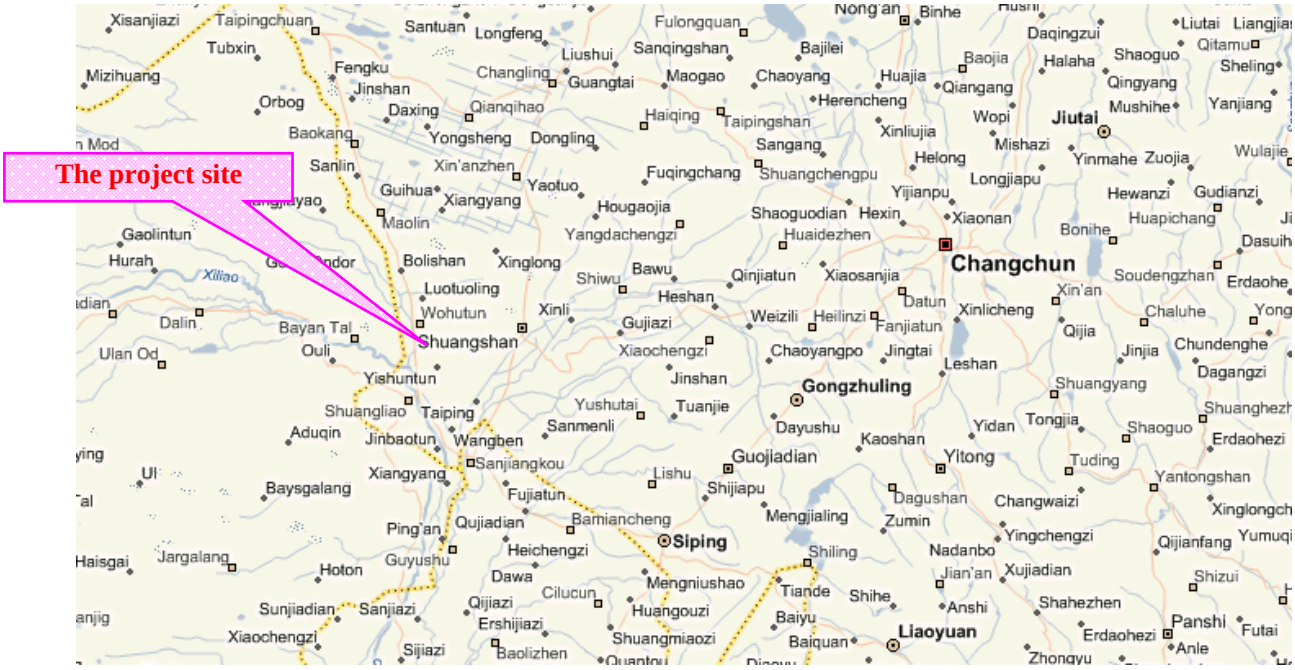

Figure A-2: Location of the project site

A.4. Technical description of the project

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The project scenario is the implementation of the project, 33 turbines, type of Goldwind 82/1500KW, are installed, each of which has a 1500kW capacity, providing a total capacity of 49.5MW.The annual

electricity delivered to the grid is expected to be 103,047 MWh and replace the same amount of electricity generated by Northeast China Power Grid dominated by fossil fuel fired power plants.

According to the turbine layout, each turbine is equipped with one transformer. Through 10kV transmission lines, the electricity can be delivered to the Step-up 66KV substation installed on the project site. The power in the Step-up 66KV substation was transmitted to the Shuangliao 220KV Substation, and then to Jilin provincial Power Grid, which is an integral part of Northeast China Power Grid. The flow diagram of the project is shown in figure A-3 below:

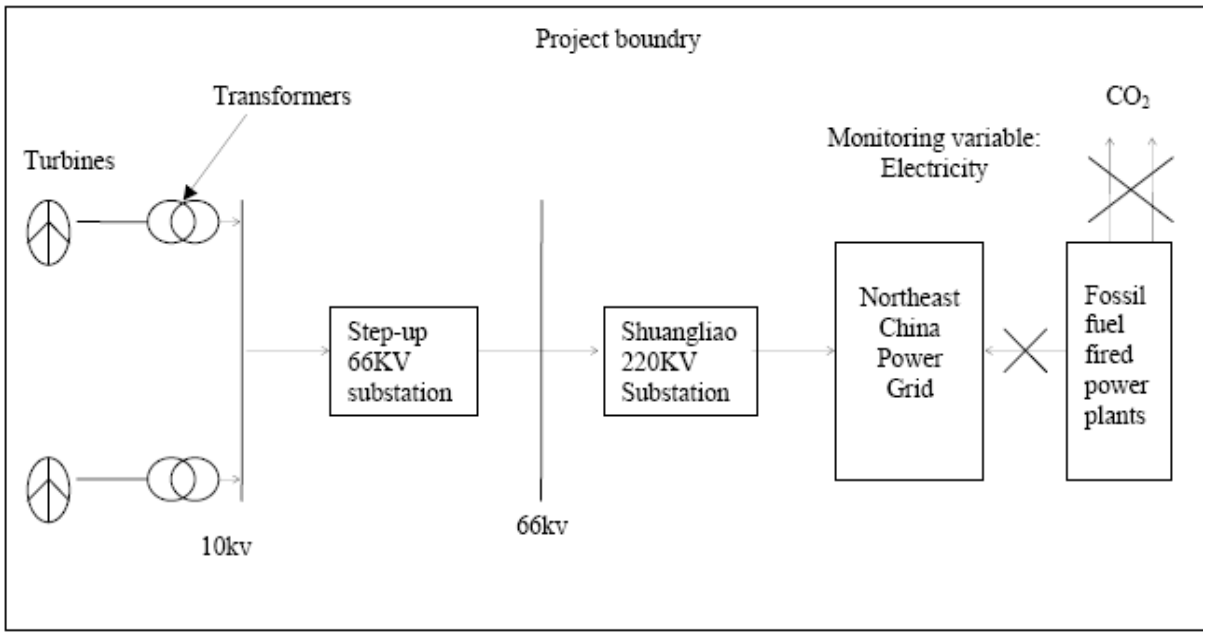

Figure A- 3: Flow diagram of the project

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

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Version 08 of ACM0002: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ACM0002/ Version 08, Sectoral Scope: 01, EB44).
Version 08 of ACM0002: "Consolidated monitoring methodology for grid-connected electricity generation from renewable sources" (ACM0002/ Version 08, Sectoral Scope: 01, EB44)

A.6. Registration date of the project activity:

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The project registration date is 03/03/2010.
(PDD/Version 07, 15/02/2010).

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

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For the project, the renewable crediting period, i.e. 7 years *3, is adopted.

The first crediting period is from 03/03/2010 to 02/03/2017.

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

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CDM Department of China National Water Resources & Electric Power Materials & Equipment Co., Ltd. (CWEME)

Contact Information:

Mr.Lu Wei E-mail: luwei@cweme.com, TEL: +86 10 51961729.
Mr.Zhan Zhiying E-mail: zhanzhiying@cweme.com,TEL: +86 10 51967614

SECTION B. Implementation of the project activity

B.1. Implementation status of the project activity

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As per the registered PDD, the total installed capacity of the project is 49.5MW, consisting of 33 1500kW turbines. The project was registered on 03/03/2010. All the wind turbines have been grid connected on 20/04/2009. Electricity generated from the project is delivered to the Northeast China Power Grid. During the monitoring period, no malfunction occurred to the monitoring system, and the project was implemented in accordance with the validated and registered PDD.

B.2. Revision of the monitoring plan

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The monitoring report for the second monitoring period is based on the revised monitoring plan.
The revised monitoring plan has been submitted to EB on 06/05/2011 and waiting for permission from EB.

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

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There is no deviation for this monitoring period.

B.4. Notification or request of approval of changes

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Not applicable.

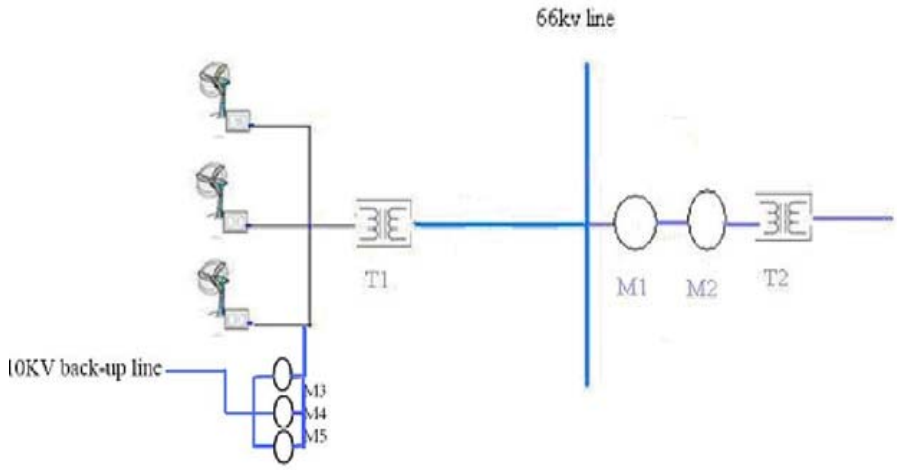
SECTION C. Description of the monitoring system

1) Description of the monitoring system

The metering equipments have been properly configured and checked annually. The metering equipments have been checked by the project owner and Grid Company before operation.

Two bidirectional meters with accuracy of 0.2s i.e. main meter (M1) and the backup meter (M2), are installed at the input side of the Shuangliao 220KV Substation to measure the electricity delivered to grid in year y ($EG_{export,y}$) and electricity purchased from the Grid in year y ($EG_{import,y}$). Data measured by meters are cross checked by sales receipts or Electricity Transaction Notes (ETNs) or sales receipts.

At the project site, there exists a 10 kV back up line and is used in case of emergency. The electricity imported through 10kV backup line ($EG_{import\text{-}back\text{-}up\text{-}line,y}$) is directly measured by three meters(M3,M4,M5) installed at the 10 kV backup line,(accuracy of three meters is 2.0).This data ($EG_{import\text{-}back\text{-}up\text{-}line,y}$) will be deducted in the calculation of the net electricity delivered to the Grid (i.e. $EG_y=EG_{export,y}- EG_{import,y}- EG_{import\text{-}back\text{-}up\text{-}line,y}$). Since these three meters are owned, operated and maintained by Local Grid Company, the Local Grid Company is in charge of reading and recording meters, and provides meter readings to Project Owner on a monthly basis.



T1:Transformer on-site T2:Shuangliao 220KV Substation
M1: Main meter (accuracy: 0.2s; SN: 94348561)
M2: Backup meter (accuracy: 0.2s; SN: 94348574)
M3: Meter (accuracy: 2.0; SN: 3532353) installed at the backup line.
M4: Meter (accuracy: 2.0; SN: 3532354) installed at the backup line
M5: Meter (accuracy: 2.0; SN: 3532355) installed at the backup line

Figure C-1: Location of the metering equipments

The project developer and the Grid Company take a meter reading on a monthly basis. This number is confirmed in the form of an "Electricity Transaction Notes" (ETNs); whereby the Grid Company signs a statement indicating that they agree with the recorded value. This documentation are compared against the monitoring data in confirming the reliability of the reading.

2) Organizational structure, roles and responsibilities of personnel

The monitoring plan clearly states the roles and responsibilities of the persons from the project owner who are involved in the monitoring of grid-connected electricity generation by the project.

Overall responsibility for daily monitoring and reporting lies with the project owner. A CDM group was established within the owner company to carry out the monitoring work. The staffs have been trained by the experts of the project consultancy-CWEME. The operating and management structure is shown as Figure C-2 below:

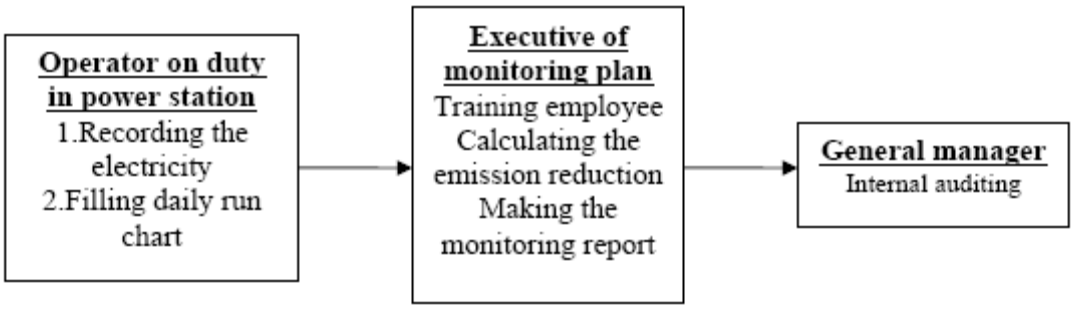


Figure C-2: The operating and management structure

3) Emergency procedures

Should any previous months reading of the meter be inaccurate by more than the allowable error, or otherwise functioned improperly, the grid-connected electricity generated by the project shall be determined by:

a) Reading the backup meter, unless a test by either party reveals it is inaccurate;
b) If the back up system is not with acceptable limits of accuracy or is otherwise performing

improperly, the project owner and the grid company shall jointly prepare an estimate of the correct reading;

c) If the project owner and the grid company fail to agree the estimate of the correct reading then the matter will be referred for arbitration according to agreed procedures.

No inaccurate meter reading was occurred during this second monitoring period, and has been confirmed by Grid Company.

SECTION D. Data and parameters

D.1. Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors	
Data / Parameter:	$EF_{grid,CM,y}$
Data unit:	tCO_2e/MWh
Description:	Emission factor of the Grid
Source of data used:	Registered PDD
Value(s) :	1.1438
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Used for Baseline emission calculation
Additional comment:	This value is fixed during the monitoring period

D.2. Data and parameters monitored	
Data / Parameter:	$EG_{export,y}$
Data unit:	MWh
Description:	Electricity delivered to grid in year y
Measured /Calculated /Default:	Measured by a bidirectional meter (M1)with accuracy of 0.2s
Source of data:	Meter reading records
Value(s) of monitored parameter:	Refer to section E.1
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	The conservative value after cross checking has been used for the baseline emissions calculation.
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	See table below
Measuring/ Reading/ Recording frequency:	Continuously measurement and monthly recording
Calculation method (if applicable):	--
QA/QC procedures	According to national standard, the M1 and M2 were calibrated annually. Data

Meter description	Type	accuracy	Serial Number	Calibration Date	Calibration Frequency	Calibration due on
Main meter(M1)	ZFD402CT44	0.2s	94348561	29/03/2010	annually	28/03/2011
				22/03/2011		21/03/2012
Backup meter(M2)	ZFD402CT44	0.2s	94348574	29/03/2010		28/03/2011
				22/03/2011		21/03/2012

applied:	measured by meters was cross checked by Electricity Transaction Notes (ETN) or sales receipts.

Data / Parameter:	$EG_{import,y}$
Data unit:	MWh
Description:	Electricity purchased from the Grid by project activity in year y
Measured /Calculated /Default:	Measured by the same bidirectional meter, which has been described above.
Source of data:	Meter reading records
Value(s) of monitored parameter:	Refer to section E.1
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	The conservative value after cross checking has been used for the baseline emissions calculation.
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	

Meter description	Type	accuracy	Serial Number	Calibration Date	Calibration Frequency	Calibration due on
Main meter(M1)	ZFD402CT44	0.2s	94348561	29/03/2010	annually	28/03/2011
				22/03/2011		21/03/2012
Backup meter(M2)	ZFD402CT44	0.2s	94348574	29/03/2010		28/03/2011
				22/03/2011		21/03/2012

Measuring/ Reading/ Recording frequency:	Continuously measured and monthly recorded
Calculation method (if applicable):	
QA/QC procedures applied:	According to national standard, the M1 and M2 were calibrated annually. Data measured by meters was cross checked by Electricity Transaction Notes (ETN) or sales receipts.

Data / Parameter:	$EG_{import\text{-}back\text{-}up\ line\ ,y}$
Data unit:	MWh
Description:	Electricity imported from the 10kV back up line by the Project in year y
Measured /Calculated /Default:	Measured by three Single-phase Single-wire installed active power meters in 10kV back up line.
Source of data:	Meter reading records
Value(s) of monitored parameter:	Refer to section E.1
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	The conservative value after cross checking has been used for the baseline emissions calculation.

<table>
<tr><td>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</td><td colspan="6"><table>
<tr><th>Meter description</th><th>Type</th><th>accuracy</th><th>Serial Number</th><th>Calibration Date</th><th>Calibration Frequency</th><th>Calibration due on</th></tr>
<tr><td rowspan="2">Meter(M3) installed at the backup line</td><td rowspan="2">DDS110</td><td rowspan="2">2.0</td><td rowspan="2">3532353</td><td>01/01/2009</td><td rowspan="6">Once every two years</td><td>01/01/ 2011</td></tr>
<tr><td>31/12/2010</td><td>30/12/2012</td></tr>
<tr><td rowspan="2">Meter(M4) installed at the backup line</td><td rowspan="2">DDS110</td><td rowspan="2">2.0</td><td rowspan="2">3532354</td><td>01/01/2009</td><td>01/01/ 2011</td></tr>
<tr><td>31/12/2010</td><td>30/12/2012</td></tr>
<tr><td rowspan="2">Meter(M5) installed at the backup line</td><td rowspan="2">DDS110</td><td rowspan="2">2.0</td><td rowspan="2">3532355</td><td>01/01/2009</td><td>01/01/ 2011</td></tr>
<tr><td>31/12/2010</td><td>30/12/2012</td></tr>
</table></td></tr>
<tr><td>Measuring/ Reading/ Recording frequency:</td><td colspan="6">Continuously measured and monthly recorded.</td></tr>
<tr><td>Calculation method (if applicable):</td><td colspan="6">$EG_{import\text{-}back\text{-}up\ line,y}$ is the total amount of electricity measured by M3,M4,M5 in year y.</td></tr>
<tr><td>QA/QC procedures applied:</td><td colspan="6">According to national standard (DL/T448-2000), meters will be calibrated periodically. Data measured by meters will be cross checked by Electricity Transaction Notes (ETN) or sales receipts.</td></tr>
</table>

Data / Parameter:	EG_y
Data unit:	MWh
Description:	Net electricity delivered to grid in year y
Measured /Calculated /Default:	Calculated
Source of data:	Meter reading records of $EG_{export,y}$, $EG_{import,y}$ and $EG_{import\text{-}back\text{-}up\ line,y}$
Value(s) of monitored parameter:	Refer to section E.1
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	The conservative value after cross checking has been used for the baseline emissions calculation.
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Refer to descriptions in above 3 tables.
Measuring/ Reading/ Recording frequency:	Refer to descriptions in above 3 tables.
Calculation method (if applicable):	$EG_y=EG_{export,y}- EG_{import,y}- EG_{import\text{-}back\text{-}up\text{-}line,y}$
QA/QC procedures applied:	

SECTION E. Emission reductions calculation

E.1. Baseline emissions calculation

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The monthly electricity data is listed in Table as following:

Table 1 Determination of electricity delivered to the Grid			
Period	Electricity delivered to the Grid By Meter Reading (MWh)	Electricity delivered to the Grid By Invoices (MWh)	Electricity delivered to Grid ($EG_{export,y}$) (MWh)
A	**B**	**C**	**D=Min(B,C)**
25/09/2010~24/10/2010	11501.8992	11500	11500
25/10/2010~24/11/2010	10158.984	10160	10158.984
25/11/2010~24/12/2010	8,230.23	8230	8230
25/12/2010~24/01/2011	4871.592	4870	4870
25/01/2011~22/02/2011	5737.8816	5740	5737.8816
23/02/2011~24/03/2011	10604.484	10600	10600
25/03/2011~24/04/2011	14116.6872	14120	14116.6872
TOTAL	65,221.7544	65,220	**65,213.5528**

Table 2 Determination of the electricity purchased from the Grid			
Period	Electricity purchased from the Grid by meter reading (MWh)	Electricity purchased from the Grid By Invoices (MWh)	Electricity purchased from Grid ($EG_{import,y}$) (MWh)
A	**B**	**C**	**D=Max(B,C)**
25/09/2010~24/10/2010	24.1560	24.1560	24.1560
25/10/2010~24/11/2010	21.8592	21.8592	21.8592
25/11/2010~24/12/2010	43.4808	43.4808	43.4808
25/12/2010~24/01/2011	46.0944	46.0944	46.0944
25/01/2011~22/02/2011	44.4312	44.4312	44.4312
23/02/2011~24/03/2011	19.4040	19.4040	19.4040
25/03/2011~24/04/2011	18.5328	18.5328	18.5328
TOTAL	217.9584	217.9584	**217.9584**

Table 3 Determination of the electricity imported from the 10kV back up line	
Period	Electricity imported from the 10kV back-up line in year y($EG_{import\text{-}back\text{-}up\text{-}line,y}$)(MWh)
25/09/2010~24/10/2010	0
25/10/2010~24/11/2010	0

25/11/2010~24/12/2010	0
25/12/2010~24/01/2011	0
25/01/2011~22/02/2011	0
23/02/2011~24/03/2011	0
25/03/2011~24/04/2011	0.3
TOTAL	0.3

$EG_y = EG_{export,y} - EG_{import,y} - EG_{import\text{-}back\text{-}up\text{-}line,y}$ = 64,995.2944 MWh
Based on the above, the net electricity delivered to the Grid is:
EG_y = 64,995.2944 MWh.

The Baseline Emission (BE *y*) is calculated as follow**:**

Monitoring period(25/09/2010-24/04/2011)

Total Net Electricity Delivered to the Grid(MWh) $EG_y = EG_{export,y} - EG_{import,y} - EG_{import\text{-}back\text{-}up\text{-}line,y}$	64,995
Baseline Emission Factor (tCO_2e/MWh) ($EF_{grid,CM,y}$)	1.1438
$BEy = EG_y * EF_{grid,CM,y}$ (tCO_2e)	74,341

E.2. Project emissions calculation

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Project emission (PE *y*) is 0 tCO_2e as per the registered PDD.

E.3. Leakage calculation

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Leakage (LE *y*) is 0 tCO_2e as per the registered PDD.

E.4. Emission reductions calculation / table

>>
Total baseline emissions: 74,341 tCO_2e
Total project emissions: 0
Total leakage: 0

The total Emission Reduction (ER y) is calculated as follow:
ER *y* = BE *y* – PE *y* – LE *y*=74,341-0-0=74,341 tCO_2e

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

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Item	Values applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period
Emission reductions (tCO_2e/Year)	68,458 (212 days)	74,341 (212 days)

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

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In conclusion, from 25/09/2010 to 24/04/2011, the ERs accomplished are 74,341 tCO_2e. Comparing with the PDD 68,458 tCO_2e (212days) the actual volume would appear to be a little higher than the estimates in the registered PDD.

This is mainly because of the natural fluctuate of the wind resource and actual generator operation conditions, the difference is acceptable, and the actual emission reduction is reasonable.

History of the document

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