



## Monitoring report form (Version 03.1)

### Monitoring report

<b>Title of the project activity</b>	Guangdong Taishan Shangchuandao Island Phase I Wind Farm Project
<b>Reference number of the project activity</b>	2953
<b>Version number of the monitoring report</b>	01
<b>Completion date of the monitoring report</b>	21/02/2013
<b>Registration date of the project activity</b>	07/02/2010
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring period Number: 02 Monitoring period Dates: 01/10/2011 – 31/12/2012 (first and last days included)
<b>Project participant(s)</b>	CGN Taishanchuandao Wind Power Co., Ltd. (as the project owner) Carbon Resource Management Ltd. & Carbon Resource Management S.A. (as the CER buyer)
<b>Host Party(ies)</b>	P.R.China
<b>Sectoral scope(s) and applied methodology(ies)</b>	Sectoral Scope:01 Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated methodology for grid-connected electricity generation from renewable sources" (Version 09) Approved "Tool for demonstration and assessment of additionality"(Version 05.2) Approved "Tool to calculate the emission factor for an electricity system" (Version 01.1)
<b>Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD</b>	108,167 tCO <sub>2</sub> e
<b>Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period</b>	110,108tCO <sub>2</sub> e

**SECTION A. Description of project activity****A.1. Purpose and general description of project activity**

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Guangdong Taishan Shangchuandao Island Phase I Wind Farm Project (hereinafter referred to as the Project) is located in Shangchuandao Island, Chuandao Town, Taishan County, Jiangmen City, Guangdong Province, P.R.China. It is invested, constructed and operated by CGN Taishanchuandao Wind Power Co., Ltd..

The total installed capacity of the Project is 48.45 MW equipped with 57 sets of wind turbines with a unit installed capacity of 850 kW. Electricity generated by the Project is delivered to South China Power Grid. The Project as a renewable energy source generates emission reductions by avoiding CO<sub>2</sub> emissions from the same amount of electricity generation from South China Power Grid, which is mainly composed of traditional thermal power plants.

Construction of the Project was started on 01/02/2009. The Project was commissioned on 14/08/2010. This monitoring report focuses on the emission reductions generated by the Project from 01/10/2011 to 31/12/2012. Actual emission reductions of the Project are 110,108 tCO<sub>2</sub>e in this monitoring period.

**A.2. Location of project activity**

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The Project is located in Shangchuandao Island, Chuandao Town, Taishan County, Jiangmen City, Guangdong Province, P.R.China.

Geographical coordinates:

East longitude, from 112°46'11" to 112°47'08"

North latitude, from 21°34'50" to 21°39'03"

**A.3. Parties and project participant(s)**

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
People's Republic of China (host)	CGN Taishanchuandao Wind Power Co., Ltd.	No
United Kingdom of Great Britain and Northern Ireland	Carbon Resource Management Ltd.	No
Switzerland	Carbon Resource Management S.A.	

**A.4. Reference of applied methodology**

&gt;&gt;

Approved consolidated baseline and monitoring methodology ACM0002: "Consolidated methodology for grid-connected electricity generation from renewable sources" (Version 09).

The approved "Tool for demonstration and assessment of additionality", Version 05.2; and

The approved "Tool to calculate the emission factor for an electricity system", Version 01.1;

Reference:

<http://cdm.unfccc.int/methodologies/PAmethodologies/approve>

**A.5. Crediting period of project activity**

&gt;&gt;

A renewable crediting period (7 years $\times$ 3) is adopted by the Project. The starting date of crediting period post-registration has been changed from 07/02/2010 to 14/08/2010 and accepted by the EB. Therefore, the first crediting period is from 14/08/2010 to 13/08/2017.

## SECTION B. Implementation of project activity

### B.1. Description of implemented registered project activity

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The Project is a greenfield grid-connected wind power project. The total installed capacity of the Project is 48.45 MW equipped with 57 sets of wind turbines with a unit installed capacity of 850 kW. Electricity generated by the Project is delivered to South China Power Grid. Please refer to Table 1 for key technical parameters of turbines in the Project.

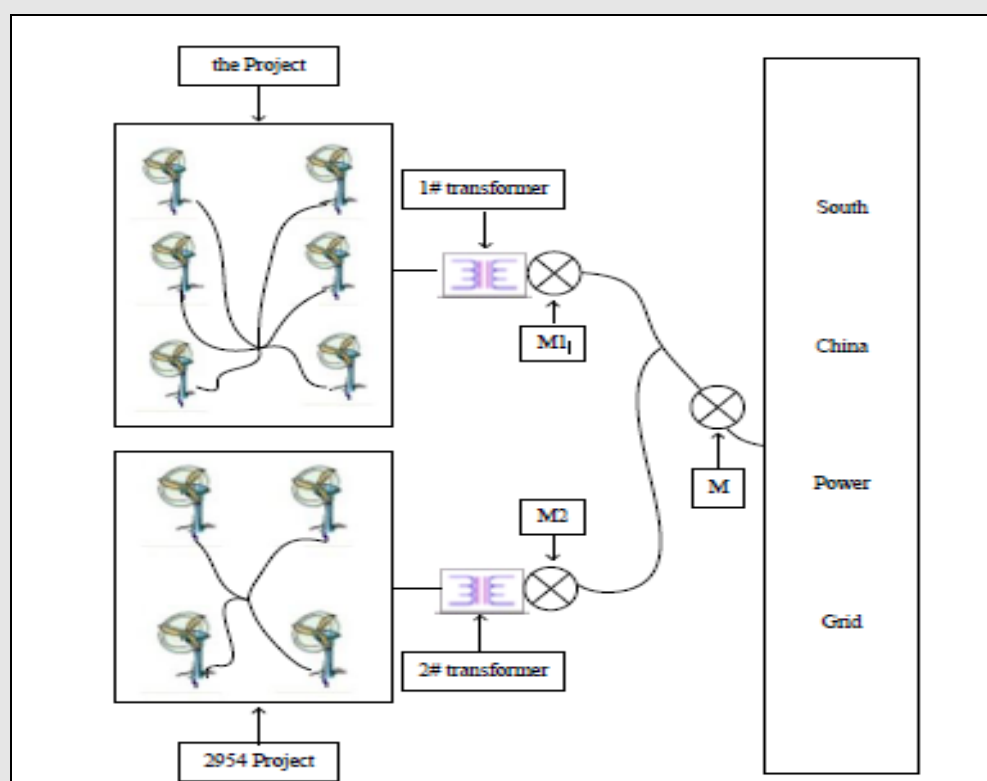
Construction of the Project was started on 01/02/2009. The Project was commissioned on 14/08/2010.

From then, key equipments of the Project have been operating in line with the registered CDM-PDD approved by CDM EB. During this monitoring period, no overhaul was undertaken for the Project and there was no downtime or exchange of equipment.

No special event or situation, which may impact the applicability of the methodology, occurred in this monitoring period.

The technology process of the Project and key technical parameters of turbines are as below:

**Figure 1 Technology process of the project**



**Table 1 Technical Characteristics of the generating equipments**

Model	V52-850 kW
Rated capacity	850 kW
Rotor diameter	52 m
Swept area	2124 m <sup>2</sup>
Cut-in speed	4 m/s

Rated wind speed	19 m/s
Cut-out speed	25 m/s
Rated voltage of generator	690 V

## **B.2. Post registration changes**

### **B.2.1. Temporary deviations from registered monitoring plan or applied methodology**

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There is no deviation request proposed for the current monitoring period.

### **B.2.2. Corrections**

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There is no corrections request proposed for the current monitoring period.

### **B.2.3. Permanent changes from registered monitoring plan or applied methodology**

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There is no permanent change from registered monitoring plan or applied methodology request proposed for the current monitoring period.

### **B.2.4. Changes to project design of registered project activity**

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There is no change to project design of registered project activity request proposed for the current monitoring period.

### **B.2.5. Changes to start date of crediting period**

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The crediting period of the Project is 07/02/2010 to 06/02/2017 (Renewable) (changed from the original crediting period 14/08/2010 to 13/08/2017).

### **B.2.6. Types of changes specific to afforestation or reforestation project activity**

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This is not applicable since the project is not an afforestation or reforestation project activity.

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

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### **1. Monitoring system and data collection**

As designed in the registered CDM-PDD, the actual situation is that two projects share the same 110 kV transmission line when connecting to the grid (figure 2). In order to conservatively separate the quantity of net electricity supplied by the Project, there are three electricity meters related to the monitoring system of the Project.

The electricity meter M1 installed at the 1# transformer in the substation at the Project Site measures the electricity generation of the Project and the electricity meter M2 installed at the 2# transformer in the substation at the Project Site measures the electricity generation of 2954 Project (Another CDM project whose reference number is 2954). The electricity meter M installed at the outlet end of the substation at the Project Site measures the total exported and imported electricity of the two projects. M1 and M2 are so-called "appropriate additional meters" as described in the registered CDM-PDD by which electricity generation can be separately monitored for each project so as to calculate the share of the Project. Both these two transformers and three electricity meters are installed at the substation of the Project Site which is also the substation connected to the grid as approved by the grid company.

As per the registered CDM-PDD, four monitoring points are utilized in the Project as follows:

M, for total electricity exported to the grid by 2954 Project and the Project;

M, for total electricity imported from the grid by 2954 Project and the Project;

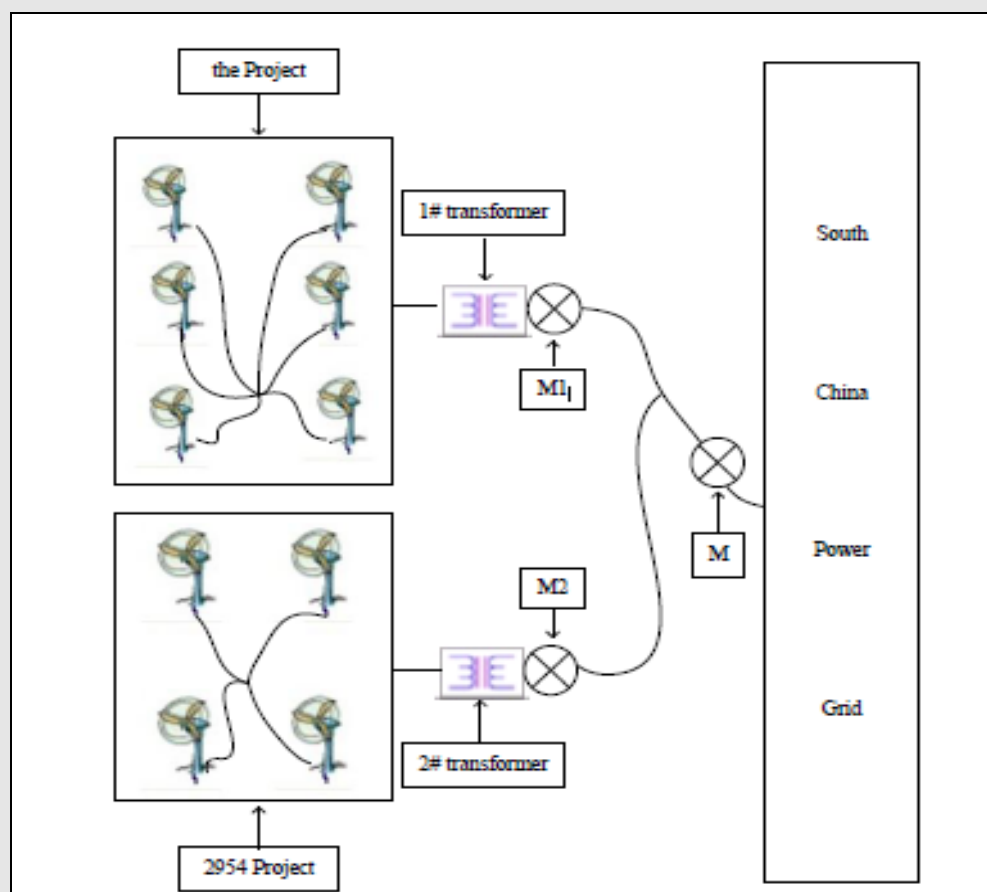
M1, for electricity generation of the Project;

M2, for electricity generation of 2954 Project;

All relevant electricity data are hourly measured. Readings of these electricity meters at 00:00:00 on the first day and 24:00:00 on the last day of every month are recorded. Then, these monthly data are aggregated for use. All these data will be directly reported to the technology department.

Indicative electric connection diagram of the project is described as follow:

**Figure 2 Indicative electric connection diagram of the project activity**



## 2. Organizational structure and responsibility

**Table 2. Organizational structure and roles and responsibilities**

Organizational structure		Roles and responsibilities
Monitoring director		Data crosscheck Submission of monitoring reports and data to the DOE Liaison with the DOE and the CDM consultant
Technology department		Crosscheck of electricity data Issuance of invoices to the grid company
	Monitoring staff	Recording, reporting and storing of the electricity data Calculation of the net electricity generation during the crediting period
	Auditing staff	Check of the calculation results of the net electricity generation each month

## 3. Quality assurance and quality control

The electricity meters are at least annually calibrated for precision by a qualified entity in accordance with

industry standards (e.g. the power sector standard DL/T448 in China). Calibration records are kept by the monitoring staff for verification. The meters will be jointly inspected and sealed on behalf of the parties concerned and not be interfered with by either party except in the presence of the other party or its accredited representatives.

#### 4. Emergency procedures

The readings of the main meter will be adopted in normal condition. If the main meter has a breakdown, the readings of the backup meter will be adopted. If both the main meter and the backup meter have breakdowns, the net electricity supplied to the grid will be calculated from the readings of other meters deducting the line losses. When the main meter or backup meter have a breakdown, the party finding the breakdown should tell the other party and inform the qualified calibration organization to check, calibrate, test and treat the meter so as to recover the normal monitoring state.

#### 5. Training

A CDM Monitoring Manual has been compiled and training on personnel from the CDM Project Office has been completed within three months from registration of the Project. Training on new personnel to the CDM Project Office will be completed within three months from starting work.

### SECTION D. Data and parameters

#### D.1. Data and parameters fixed ex ante or at renewal of crediting period

<b>Data / Parameter:</b>	$EF_{grid,CM,y}$
Unit:	tCO <sub>2</sub> /MWh
Description:	The Baseline emission factor
Source of data:	The registered PDD
Value(s) applied:	0.8933
Purpose of data:	The data is used for the baseline emission calculation.
Additional comment:	-

#### D.2. Data and parameters monitored

<b>Data / Parameter:</b>	$EG_y$
Unit:	MWh
Description:	Electricity supplied to the grid by the Project
Measured/ Calculated / Default:	Calculated
Source of data:	Refer to Section D.1
Value(s) of monitored parameter:	123,260.581

Monitoring equipment:	M	
	Type	Electricity Meter
	Accuracy class	0.5s
	Serial Number	96274250
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
	M1	
	Type	Electricity Meter
	Accuracy class	0.2s
	Serial Number	10040284960050
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
	M2	
	Type	Electricity Meter
	Accuracy class	0.2s
	Serial Number	20080761040066
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/ Reading/ Recording frequency:	Continuously measurement and monthly recording	
Calculation method (if applicable):	$EG_y = EG_{export,y} - EG_{import,y}$	
QA/QC procedures:	Records for sold electricity are used for crosscheck.	
Purpose of data:	Baseline emission calculation	
Additional comment:	-	

Data/Parameter	$EG_{export,y}$
Unit	MWh
Description	Electricity exported to the grid by the Project
Measured/Calculated /Default	Calculated
Source of data	Refer to Section D.1
Value(s) of monitored parameter	123,503.109



Monitoring equipment	M	
	Type	Electricity Meter
	Accuracy class	0.5s
Monitoring equipment	Serial Number	96274250
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
	M1	
	Type	Electricity Meter
	Accuracy class	0.2s
	Serial Number	10040284960050
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
	M2	
	Type	Electricity Meter
	Accuracy class	0.2s
	Serial Number	20080761040066
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording	
Calculation method (if applicable)	$EG_{export,y} = EG_{export,total} \times EG_{project} / (EG_{project} + EG_{others})$	
QA/QC procedures	Data will be kept at least for two years after the end of the last crediting period. Relevant meters will be calibrated at least once a year by a qualified calibration organization in accordance with industry standards.	

Purpose of data	Baseline emission calculation
Additional comment	-

Data/Parameter	$EG_{import,y}$	
Unit	MWh	
Description	Electricity imported from the grid by the Project	
Measured/Calculated /Default	Measured	
Source of data	Refer to Section D.1	
Value(s) of monitored parameter	242.528	
Monitoring equipment	M	
	Type	Electricity Meter
	Accuracy class	0.5s
	Serial Number	96274250
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording	
Calculation method (if applicable)	$EG_{import,y}=EG_{import,total}$	
QA/QC procedures	Data will be kept at least for two years after the end of the last crediting period. Relevant meters will be calibrated at least once a year by a qualified calibration organization in accordance with industry standards.	
Purpose of data	Baseline emission calculation	
Additional comment	-	

Data/Parameter	$EG_{project}$
Unit	MWh
Description	Electricity generation of the Project
Measured/Calculated /Default	Measured

Source of data	Monthly reading record	
Value(s) of monitored parameter	123,588.080	
Monitoring equipment	M1	
	Type	Electricity Meter
	Accuracy class	0.2s
	Serial Number	10040284960050
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording	
Calculation method (if applicable)	NA	
QA/QC procedures	<p>Data will be kept at least for two years after the end of the last crediting period.</p> <p>Relevant meters will be calibrated at least once a year by a qualified calibration organization in accordance with industry standards.</p> <p>Records for sold electricity are used for crosscheck.</p>	
Purpose of data	Baseline emission calculation	
Additional comment	-	

Data/Parameter	<i>EG<sub>others</sub></i>
Unit	MWh
Description	Electricity generation of 2954 Project
Measured/Calculated/Default	Measured
Source of data	Monthly reading record
Value(s) of monitored parameter	90,758.800

Monitoring equipment	M2	
	Type	Electricity Meter
	Accuracy class	0.2s
	Serial Number	20080761040066
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording	
Calculation method (if applicable)	NA	
QA/QC procedures	Data will be kept at least for two years after the end of the last crediting period. Relevant meters will be calibrated at least once a year by a qualified calibration organization in accordance with industry standards. Records for sold electricity are used for crosscheck.	
Purpose of data	Baseline emission calculation	
Additional comment	-	
Data/Parameter	$EG_{export, total}$	
Unit	MWh	
Description	Total electricity exported to the grid by 2954 Project and the Project	
Measured/Calculated/Default	Measured	
Source of data	Monthly reading record	
Value(s) of monitored parameter	214,200.800	

Monitoring equipment	M	
	Type	Electricity Meter
	Accuracy class	0.5s
	Serial Number	96274250
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording	
Calculation method (if applicable)	NA	
QA/QC procedures	<p>Data will be kept at least for two years after the end of the last crediting period.</p> <p>Relevant meters will be calibrated at least once a year by a qualified calibration organization in accordance with industry standards.</p> <p>Records for sold electricity are used for crosscheck.</p>	
Purpose of data	Baseline emission calculation	
Additional comment	-	

Data/Parameter	$EG_{import, total}$
Unit	MWh
Description	Total electricity imported from the grid by 2954 Project and the Project
Measured/Calculated /Default	Measured
Source of data	Monthly reading record
Value(s) of monitored parameter	242.528

Monitoring equipment	M	
	Type	Electricity Meter
	Accuracy class	0.5s
	Serial Number	96274250
	Calibration frequency	Annually
	Date of calibration	29/11/2010
	Validity	28/11/2011
	Date of calibration	28/11/2011
	Validity	27/11/2012
	Date of last calibration	27/11/2012
	Validity	26/11/2013
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording	
Calculation method (if applicable)	NA	
QA/QC procedures	Data will be kept at least for two years after the end of the last crediting period. Relevant meters will be calibrated at least once a year by a qualified calibration organization in accordance with industry standards. Records for sold electricity are used for crosscheck.	
Purpose of data	Baseline emission calculation	
Additional comment	-	

### D.3. Implementation of sampling plan

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The parameters monitored described in section D.2 above are not involved the sampling approach.

## SECTION E. Calculation of emission reductions or GHG removals by sinks

### E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

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The baseline emission  $BE_v$  (tCO<sub>2</sub>) during the monitoring period results from:

$$BE_v = EG_v \times EF_{grid,CM,v}$$

Where:

$BE_v$  = Baseline emissions (tCO<sub>2</sub>)

$EG_v$  = Net electricity supplied to the grid by the Project (MWh).

$EF_{grid,CM,v}$  = Emission factor of the grid (tCO<sub>2</sub>/MWh)

As designed in the registered CDM-PDD, if the actual situation is that two projects share the same 110 kV transmission line when connecting to the grid, in order to conservatively separate the quantity of net electricity supplied by the Project, it is calculated as:

$$EG_v = EG_{export,v} - EG_{import,v}$$

$$EG_{export,v} = EG_{export,total} \times EG_{project} / (EG_{project} + EG_{others})$$

$$EG_{import,v} = EG_{import,total}$$

Where:

$EG_{\text{export,total}}$  = Total electricity exported to the grid by 2954 Project and the Project (MWh)

$EG_{\text{import,total}}$  = Total electricity imported from the grid by 2954 Project and the Project (MWh)

$EG_{\text{project}}$  = Electricity generation of the Project (MWh)

$EG_{\text{others}}$  = Electricity generation of the 2954 Project (MWh)

The net electricity exported by the project is calculated as below:

**Table 3 The electricity exported to the grid ( $EG_{\text{project}}$ )**

Monitoring Period	Meter readings (MWh)	Sales receipts (MWh)	Conservative value after crosscheck (MWh)
01/10/2011-31/10/2011	10576.72	10576.72	10576.72
01/11/2011-30/11/2011	10976.24	10976.24	10976.24
01/12/2011-31/12/2011	14180.32	14180.32	14180.32
01/01/2012-30/01/2012	7990.40	7990.40	7990.40
01/02/2012-29/02/2012	10758.00	10758.00	10758.00
01/03/2012-31/03/2012	10161.36	10161.36	10161.36
01/04/2012-30/04/2012	3871.12	3871.12	3871.12
01/05/2012-31/05/2012	7198.40	7198.40	7198.40
01/06/2012-30/06/2012	8231.52	8231.52	8231.52
01/07/2012-31/07/2012	3908.96	3908.96	3908.96
01/08/2012-31/08/2012	1561.12	1561.12	1561.12
01/09/2012-30/09/2012	4215.20	4215.2	4215.20
01/10/2012-31/10/2012	7495.84	7495.84	7495.84
01/11/2012-30/11/2012	9499.60	9499.60	9499.60
01/12/2012-31/12/2012	12963.28	12963.28	12,963.280
<b>Total</b>			<b>123,588.080</b>

**Table 4 The electricity imported from the grid ( $EG_{\text{others}}$ )**

Monitoring Period	Meter readings (MWh)	Sales receipts (MWh)	Conservative value after crosscheck (MWh)
01/10/2011-31/10/2011	6116.88	6116.88	6116.88
01/11/2011-30/11/2011	6907.12	6907.12	6907.12
01/12/2011-31/12/2011	8570.32	8570.32	8570.32
01/01/2012-30/01/2012	6839.36	6839.36	6839.36
01/02/2012-29/02/2012	9208.32	9208.32	9208.32
01/03/2012-31/03/2012	8958.40	8958.40	8958.40
01/04/2012-30/04/2012	2485.12	2485.12	2485.12
01/05/2012-31/05/2012	4832.08	4832.08	4832.08
01/06/2012-30/06/2012	5673.36	5673.36	5673.36
01/07/2012-31/07/2012	2027.52	2027.52	2027.52
01/08/2012-31/08/2012	2573.12	2573.12	2573.12
01/09/2012-30/09/2012	2713.92	2713.92	2713.92
01/10/2012-31/10/2012	5678.64	5678.64	5678.64
01/11/2012-30/11/2012	7066.40	7066.40	7066.40
01/12/2012-31/12/2012	11108.24	11108.24	11,108.240
<b>Total</b>			<b>90,758.800</b>

**Table 5 The electricity imported from the grid ( $EG_{\text{export,total}}$ )**

Monitoring Period	Meter readings (MWh)	Sales receipts (MWh)	Conservative value after crosscheck (MWh)
01/10/2011-31/10/2011	16681.28	16681.28	16681.28
01/11/2011-30/11/2011	17872.80	17872.80	17872.80
01/12/2011-31/12/2011	22730.40	22730.40	22730.40
01/01/2012-30/01/2012	14819.20	14819.20	14819.20
01/02/2012-29/02/2012	19960.16	19960.16	19960.16
01/03/2012-31/03/2012	19104.80	19104.80	19104.80
01/04/2012-30/04/2012	6353.60	6353.60	6353.60
01/05/2012-31/05/2012	12022.56	12022.56	12022.56
01/06/2012-30/06/2012	13896.96	13896.96	13896.96
01/07/2012-31/07/2012	5925.92	5925.92	5925.92
01/08/2012-31/08/2012	4130.72	4130.72	4130.72
01/09/2012-30/09/2012	6925.60	6925.60	6925.60
01/10/2012-31/10/2012	13164.80	13164.80	13164.80
01/11/2012-30/11/2012	16554.56	16554.56	16554.56
01/12/2012-31/12/2012	24057.44	24057.44	24,057.440
<b>Total</b>			<b>214,200.800</b>

Table 6 The electricity imported from the grid ( $EG_{import,total}$ )

Monitoring Period	Meter readings (MWh)	Sales receipts (MWh)	Conservative value after crosscheck (MWh)
01/10/2011-31/10/2011	14.960	14.960	14.960
01/11/2011-30/11/2011	11.616	11.616	11.616
01/12/2011-31/12/2011	7.040	7.040	7.040
01/01/2012-30/01/2012	7.040	7.040	7.040
01/02/2012-29/02/2012	24.640	24.640	24.640
01/03/2012-31/03/2012	18.832	18.832	18.832
01/04/2012-30/04/2012	23.760	23.760	23.760
01/05/2012-31/05/2012	20.416	20.416	20.416
01/06/2012-30/06/2012	20.768	20.768	20.768
01/07/2012-31/07/2012	20.064	20.064	20.064
01/08/2012-31/08/2012	15.312	15.312	15.312
01/09/2012-30/09/2012	31.152	31.152	31.152
01/10/2012-31/10/2012	6.864	6.864	6.864
01/11/2012-30/11/2012	7.216	7.216	7.216
01/12/2012-31/12/2012	12.848	12.848	12.848
<b>Total</b>	<b>-</b>	<b>-</b>	<b>242.528</b>

Table 7 Electricity exported to the grid by the Project ( $EG_{export,y}$ )

Monitoring Period	$EG_{export,y}$
01/10/2011-31/10/2011	10,568.914
01/11/2011-30/11/2011	10,969.759
01/12/2011-31/12/2011	14,167.705
01/01/2012-30/01/2012	7,984.710
01/02/2012-29/02/2012	10,754.681
01/03/2012-31/03/2012	10,153.409



01/04/2012-30/04/2012	3,869.512
01/05/2012-31/05/2012	7,193.661
01/06/2012-30/06/2012	8,226.831
01/07/2012-31/07/2012	3,902.007
01/08/2012-31/08/2012	1,559.791
01/09/2012-30/09/2012	4,213.059
01/10/2012-31/10/2012	7,490.332
01/11/2012-30/11/2012	9,493.040
01/12/2012-31/12/2012	12,955.697
<b>Total</b>	<b>123,503.109</b>

#### Net Electricity supplied to the SCPG by the project

Monitoring Period	$EG_y = EG_{\text{export},y} - EG_{\text{import},\text{total}}$
<b>01/10/2011-31/12/2012</b>	<b>123,260.581</b>

$$BE_y = EG_y \times EF_{\text{grid,CM},y} = 123,260.581 \text{ MWh} \times 0.8933 \text{ tCO}_2\text{e/MWh} = 110,108 \text{ tCO}_2\text{e}.$$

#### E.2. Calculation of project emissions or actual net GHG removals by sinks

>>

According to ACM0002 (Version 09), no Project Emissions is to be counted by the Project.

Hence,  $PE_y = 0 \text{ tCO}_2\text{e}$

#### E.3. Calculation of leakage

>>

According to applied methodology ACM0002 in the registered PDD, the leakage of the project is not considered.

#### E.4. Summary of calculation of emission reductions or net anthropogenic GHG removals by sinks

$$ER_y = BE_y - PE_y = 110,108 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} = 110,108 \text{ tCO}_2\text{e}$$

Where:

$ER_y$  is the emission reductions in year  $y$  ( $\text{tCO}_2\text{e/yr}$ );

$BE_y$  is the baseline emission in year  $y$  ( $\text{tCO}_2\text{e/yr}$ );

$PE_y$  is the project emissions in year  $y$  ( $\text{tCO}_2\text{e/yr}$ );

Item	Baseline emissions or baseline net GHG removals by sinks ( $\text{t CO}_2\text{e}$ )	Project emissions or actual net GHG removals by sinks ( $\text{t CO}_2\text{e}$ )	Leakage ( $\text{t CO}_2\text{e}$ )	Emission reductions or net anthropogenic GHG removals by sinks ( $\text{t CO}_2\text{e}$ )
<b>Total</b>	<b>110,108</b>	<b>0</b>	<b>-</b>	<b>110,108</b>

#### E.5. Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
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<b>Emission reductions or GHG removals by sinks (t CO<sub>2</sub>e)</b>	<b>108,167<sup>1</sup></b>	<b>110,108</b>
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**E.6. Remarks on difference from estimated value in registered PDD**

&gt;&gt;

The comparison shows that the actual emission reduction is a little higher than the expectation in the registered PDD.

**E.7. Actual emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards**

<b>Item</b>	<b>Actual values achieved up to 31 December 2012</b>	<b>Actual values achieved from 1 January 2013 onwards</b>
<b>Emission reductions or GHG removals by sinks (t CO<sub>2</sub>e)</b>	<b>110,108</b>	<b>–</b>

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net anthropogenic GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.

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<sup>1</sup>According to the registered PDD, the emission reductions of the project are estimated to be 86,203 tCO<sub>2</sub>e per annum. This monitoring period from 01/10/2011 to 31/12/2012 has 458 days. As a result, the estimated emission reductions during the monitoring period are calculated as: 86,203 tCO<sub>2</sub>e /365d \*458d = 108,167 tCO<sub>2</sub>e.