



## Monitoring report form (Version 03.2)

### Monitoring report

<b>Title of the project activity</b>	Oaxaca II Wind Energy Project
<b>Reference number of the project activity</b>	5894
<b>Version number of the monitoring report</b>	01
<b>Completion date of the monitoring report</b>	21/02/2014
<b>Registration date of the project activity</b>	28/03/2012
<b>Monitoring period number and duration of this monitoring period</b>	First monitoring period (01/04/2012 – 31/01/2014)
<b>Project participant(s)</b>	CE Oaxaca Dos S. de R.L. de C.V.
<b>Host Party(ies)</b>	Mexico
<b>Sectoral scope(s) and applied methodology(ies)</b>	Sectoral Scope 1- Energy industries (renewable-/non-renewable sources). ACM002 version 12.1.0 – Consolidated methodology for grid-connected electricity generation from renewable sources.
<b>Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD</b>	441,498
<b>Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period</b>	403,979
<b>Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period up to 31 December 2012(if applicable)</b>	160,121
<b>Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period from 1 January 2013 onwards (if applicable).</b>	243,858

## SECTION A. Description of project activity

### A.1. Purpose and general description of project activity

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This monitoring report has been prepared for “Oaxaca II Wind Energy Project”. The objective of the project activity is the construction of a wind farm; the renewable energy is provided to the Mexican grid system and therefore results in the greenhouse gas (GHG) emissions reduction because in the absence of the project activity the power would have been generated by the Mexican grid system which depends mainly upon fossil fuels usage.

The Oaxaca II Wind Energy Project has a capacity of 102 MW, comprising 68 turbines generators, each with a capacity of 1.5 MW. The project was expected to generate approximately 413,712 MWh per year. This electricity would be sold to the CFE.

A fixed crediting period of 10 years has been selected for the project, which lasts from April 1, 2012 to March 31, 2022.

The project has been registered with UNFCCC as a CDM project activity under article 12 of the Kyoto protocol. Submission of monitoring report and subsequent verification has been required mandatory by UNFCCC for issuance of Certified Emission Reductions (CERs) credits. The monitoring period covered under the report is extending from *April 1<sup>st</sup> 2012 to January 31<sup>st</sup> 2014*, including both days.

At the end of the first verification period **695,917 MWh** of electricity were produced and sent to the grid. Therefore, the total amount of reduced emissions is **403,979 tCO<sub>2</sub>**.

### A.2. Location of project activity

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The project is located in Santo Domingo Ingenio Municipality, windy region, in the Isthmus of Tehuantepec, state of Oaxaca, Mexico.

The project activity coordinates are 16°34'58.82" N and 94°47'21.06" W (decimal coordinates: 16.58300561 latitude, -94.78918406 longitude).

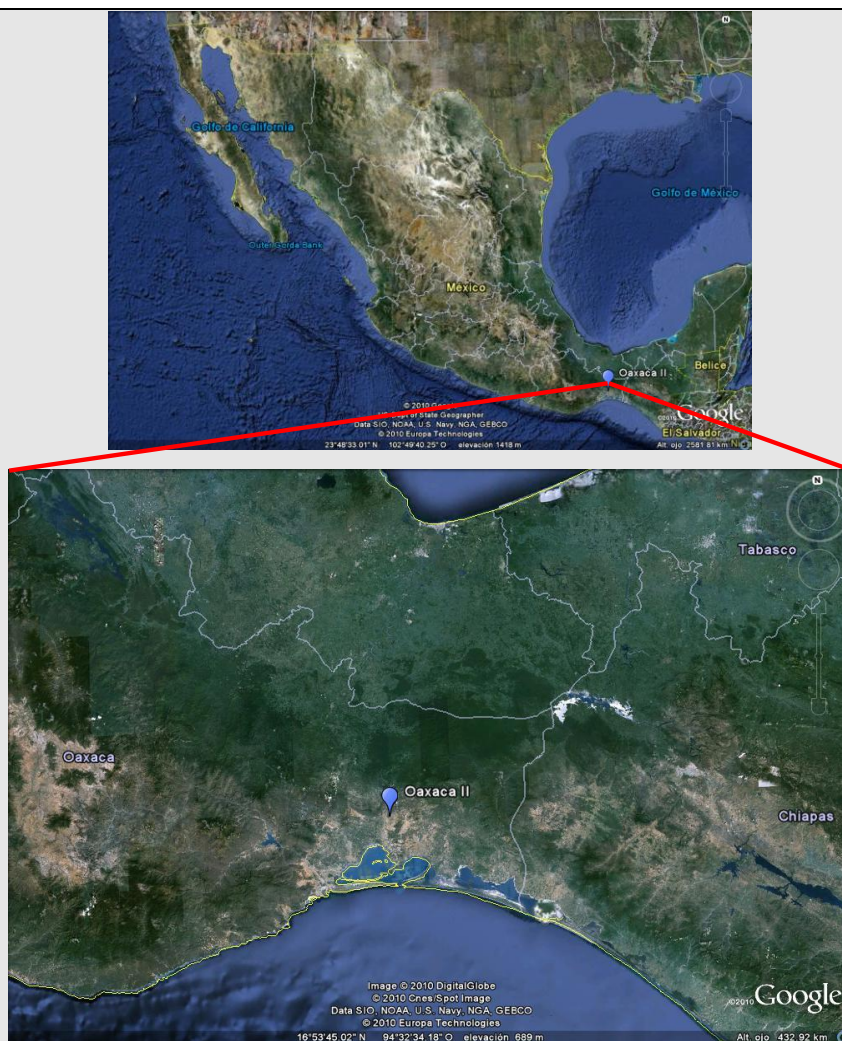


Figure 1. Localization of the project activity.

#### 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)
Mexico (host)	CE Oaxaca Dos S. de R.L. de C.V.	No

#### A.4. Reference of applied methodology

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For this project, the baseline and monitoring methodology applied is the following: Consolidated methodology for grid-connected electricity generation from renewable sources (ACM0002 ver. 12.1.0).

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

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A fixed crediting period of 10 years has been selected for the project. The project activity crediting period covers from April 1, 2012 to March 31, 2022, including both days.

**SECTION B. Implementation of project activity****B.1. Description of implemented registered project activity**

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The project start date is the date when CE Oaxaca Dos W. de R.L. de C.V. won the CFE tender by the award of contract. This was on March, 8<sup>th</sup> 2010.

The project capacity has a capacity of 102 MW with a lifetime of 20 years.

Total Power	102 MW
Rated Power per turbine	1.5 MW
Cut in-cut-out wind	4 - 25 m/s
No. of turbines	68
Equivalent annual operating hours	4,056
Annual Production	413,712 MWh
Capacity factor	46.30%
Transmission line length	32.25 km
Transmission line Voltage	230 kV

**Table 1. Power plant characteristics**

To date it has not happened any situation or event that affects or impacts the applicability of the methodology.

**B.2. Post registration changes****B.2.1. Temporary deviations from registered monitoring plan or applied methodology**

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N/A

**B.2.2. Corrections**

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N/A

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

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N/A

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

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N/A

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

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N/A

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

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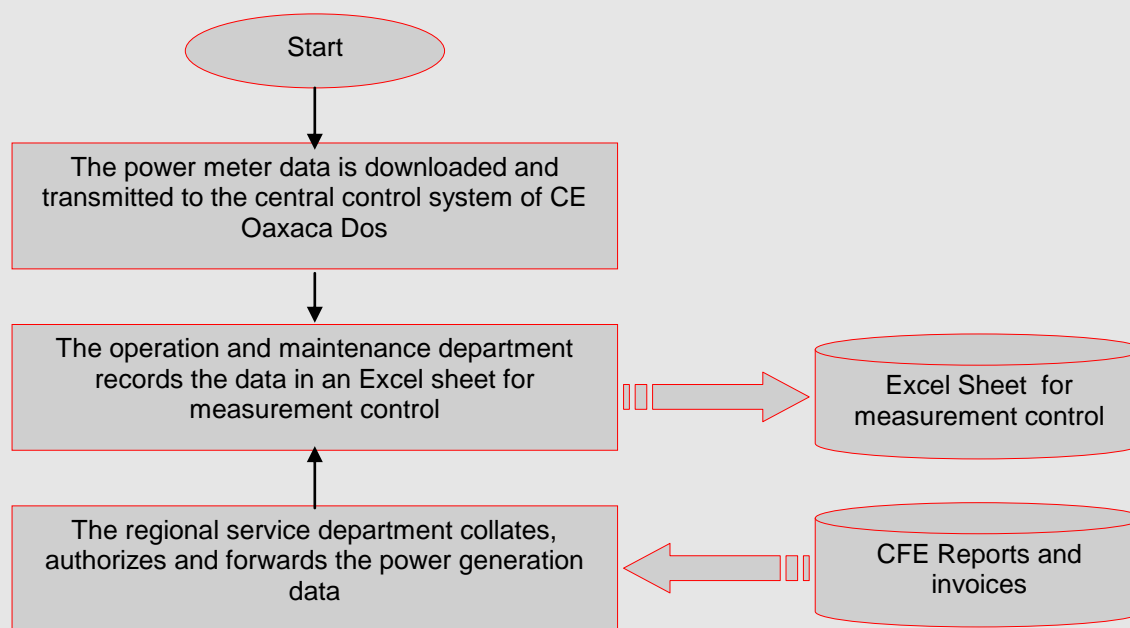
N/A

**SECTION C. Description of monitoring system**

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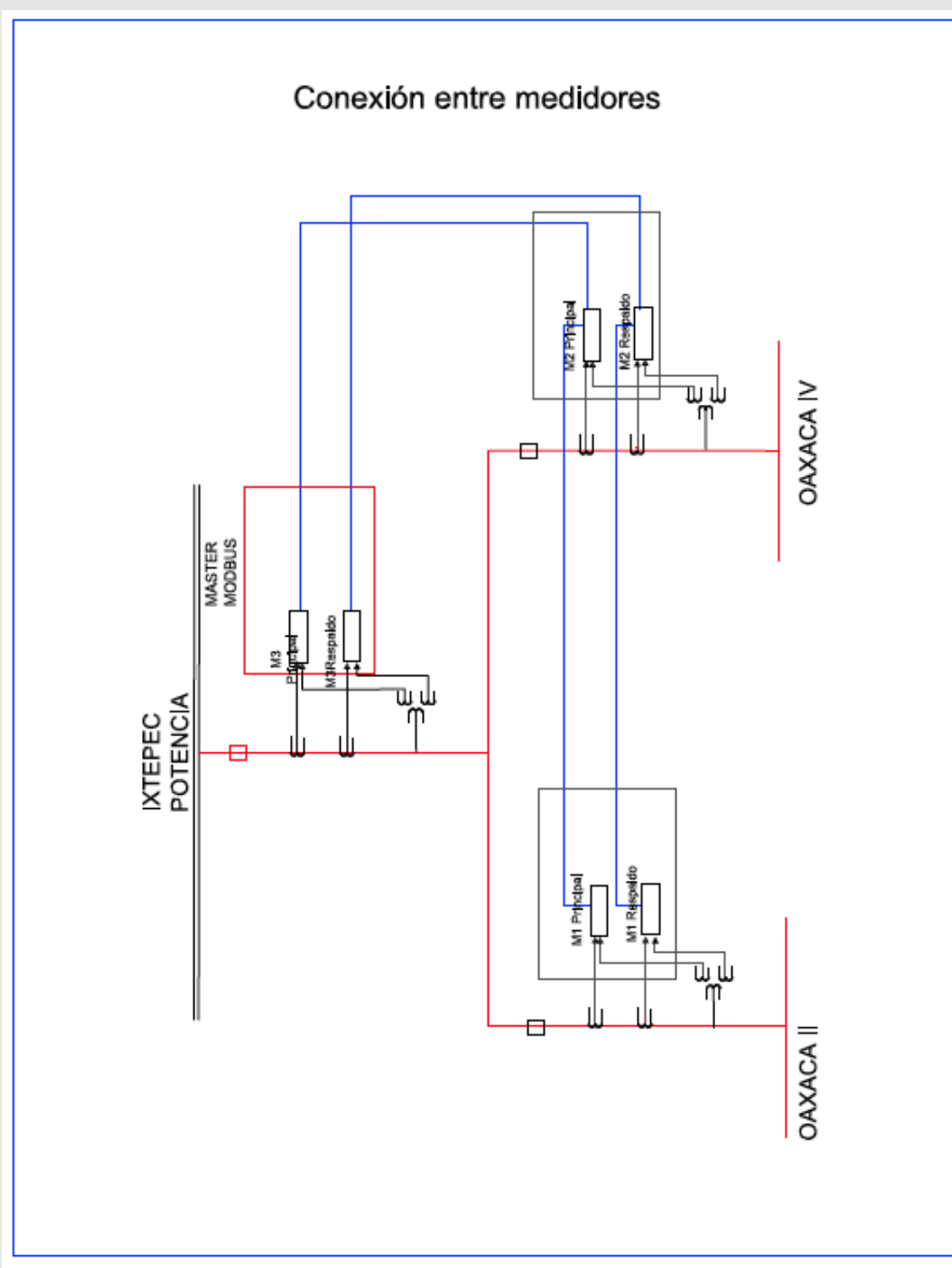
The monitoring consists mainly in using a power meters equipment to record the energy generated by the wind farm. All relevant data is collected continuously and stored during the whole crediting period.

The monitoring of the power generation from the project is done through monthly invoices which are sent at the beginning of each month by this entity. This data registers the energy generated by the project activity that is measured from the power meter located in the wind farm.



***Figure 2. Diagram of Generated Electricity Monitoring System***

Oaxaca II Wind Farm shares the transmission line with Oaxaca IV Wind Energy Project (also registered as a CDM project- ref: 6216). The next figure shows the interconnection system and the measuring points of energy.



**Figure 3. Interconnection and Measuring Point**

According to the PDD registered, the net electricity of both wind farms will be measured in the Ixtepec Potencia Substation and at the exit of each wind farm the gross energy will be measured. The net electricity of Oaxaca II Wind Farm will be calculated using the following formula

$$EG_{facility,y} = \left( \frac{EG_{project,y}}{EG_{project,y} + EG_{another,y}} * EG_{output,y} \right) - EG_{import,y}$$

Where:

EG <sub>facility,y</sub>	= Net electricity supplied by the proposed project in the year y.
EG <sub>output,y</sub>	= Total electricity supplied to the grid by the proposed project and 'another project B' in the year y.
EG <sub>import,y</sub>	= Total electricity imported from the grid by the proposed project and 'another project B' in the year y
EG <sub>project,y</sub>	= Electricity measured by meters installed at the Oaxaca II substation.
EG <sub>another,y</sub>	= Electricity measured by meters installed at the 'other project B' substation that share transmission facilities with the proposed project.

The meters used for each variable are:

EG<sub>facility,y</sub>: This correspond to the net electricity generated by Oaxaca II Wind Energy Project as was described the variable is calculated at depends of the other data.

EG<sub>output,y</sub>: Measured at Ixtepec Potencia Substation the meters used are: Main meter (MT-1011A383-01) and backup meter (MT-1011A456-01)

EG<sub>import,y</sub>: Measured at Ixtepec Potencia Substation the meters used are: Main meter (MT-1011A383-01) and backup meter (MT-1011A456-01)

EG<sub>project,y</sub>: Measured at Oaxaca II Substation the meters used are: Main meter (MT-1011A453-01) and backup meter (MT-1011A560-01)

EG<sub>another,y</sub> = Measured at Oaxaca IV Substation the meters used are: Main meter (MT-1011A462-01) and backup meter (MT-1011A388-01)

The information related to the power meters equipment calibration is included in the following table:

**Calibration Certificate (issued by LAMSE and LAPEM)**

Equipment code	Equipment	Calibration Entity <sup>1</sup>	Calibration Certificates	Calibration Frequency	Calibration Dates
MT-1011A383-01	Main power meter Ixtepec Potencia Substation	LAMSE	2011-653	Yearly	2011/10/13
			2012-641	Yearly	2012/09/18
		LAPEM	20131845	Yearly	2013/09/09
MT-1011A456-01	Backup power meter Ixtepec Potencia Substation	LAMSE	2011-654	Yearly	2011/10/13
			2012-643	Yearly	2012/09/18
		LAPEM	20131846	Yearly	2013/09/09

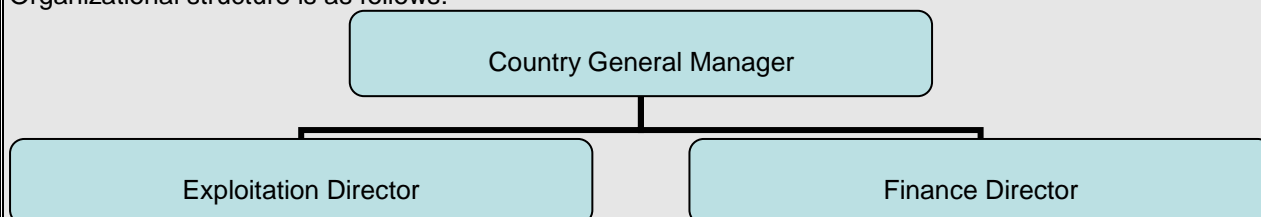
<sup>1</sup> Laboratorio Secundario de Metrología is a lab hired by Comisión Federal de Electricidad to calibrate the power meters. In the year 2013, CFE hired the Company LAPEM (Laboratorio de Pruebas de Equipos y Materiales), all the calibration certificates are delivered to the DOE.

MT-1011A453-01	Main power meter Oaxaca II Substation	LAMSE	2011-657	Yearly	2011/10/14
			2012-648	Yearly	2012/09/19
		LAPEM	20131849	Yearly	2013/09/09
MT-1011A560-01	Backup power meter Oaxaca II Substation	LAMSE	2011-658	Yearly	2011/10/14
			2012-650	Yearly	2012/09/19
		LAPEM	20131850	Yearly	2013/09/09
MT-1011A462-01	Main power meter Oaxaca IV Substation	LAMSE	2011-659	Yearly	2011/10/14
			2012-647	Yearly	2012/09/19
		LAPEM	20131851	Yearly	2013/09/09
MT-1011A388-01	Backup power meter Oaxaca IV Substation	LAMSE	2011-660	Yearly	2011/10/14
			2012-649	Yearly	2012/09/19
		LAPEM	20131852	Yearly	2013/09/09

The information is transmitted every 5 minutes to CFE central units.

**a) Roles and Responsibilities:**

Organizational structure is as follows:



Responsible	Responsibility and competences
Country General Manager	Responsible for overseeing the CDM process
Exploitation Director	Responsible for monitoring, recording, reporting and archiving measured data.  Responsible for checking data with the receipt of sales.  Responsible for corrective and preventive actions
Finance Director	Responsible for performing the emission reduction calculations based on methodology and preparing the Monitoring Report as appropriate.  Responsible for internal audit



Measuring and cross-check procedure.

**Measuring.** The person(s) responsible obtains the electricity generation information from the meters installed in the Ixtepec substation, Oaxaca II and Oaxaca IV substation on a monthly basis, and reports them in the spreadsheet designed for measurement control and stores the data electronically.

**Calculation of energy generation to be monitored.** Oaxaca II Wind Energy Project needs the measures of several point in order to calculate the net electricity generation of the project, therefore the project activity has: two certified meters (1 main, 1 backup) in Ixtepec Substation two certificate meters in Oaxaca II substation (1 main, 1 backup) and two certificate meters in Oaxaca IV substation (1 main, 1 backup); all meters are property of CFE.

**Cross-check of net electricity supplied to the grid with receipt of sales:** Net electricity supplied to the grid measured and calculated at the substation is cross-checked with receipts of sales.

If there is a mismatch, the person(s) responsible will solve it with CFE, explaining the discrepancy detected the origin of deviations and the corrective actions taken and file the evidence.

#### **Quality control (QC) procedures and quality assurance procedures (QA).**

##### **1. Monitoring equipment**

- a) Monitoring equipment is set up as per Mexican law and/or PPA.
- b) Monitoring equipment is authorized through a certificated formal process.
- c) After set up monitoring equipment is calibrated by CFE periodically as determined by the Mexican Law and/or PPA, and checked as necessary by CFE for accuracy.

##### **2. Corrective and preventive actions are followed and properly documented.**

Monthly hourly readings for main and check meters are stored in Excel sheets. Corrective and preventive actions have been made as per provision in CDM manual.

Internal audit will be done periodically as decided by management.

### **SECTION D. Data and parameters**

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

<b>Data / Parameter:</b>	<b>EF<sub>grid,CM,y</sub></b>
Unit:	tCO <sub>2</sub> /GWh
Description:	Baseline Emission factor of the Mexican Grid (calculated ex-ante)
Source of data:	Registered PDD
Value(s) applied):	0.5805 tCO <sub>2</sub> /MWh
Purpose of data:	Calculation of the baseline emission calculations
Additional comment:	NA

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

<b>Data / Parameter:</b>	<b>EG<sub>facility,y</sub></b>
Unit:	MWh/yr

Description:	Quantity of net electricity generation supplied by the project plant to the grid in year y
Measured/ Calculated / Default:	Calculated
Source of data:	Calculated according to measured parameters ( $EG_{output,y}$ $EG_{import,y}$ $EG_{project,y}$ and $EG_{another,y}$ )
Value(s) of monitored parameter:	695,917 MWh
Monitoring equipment:	<p>Main power meter and Backup power meter in Ixtepec Potencial Substation  Type: Bidirectional  Accuracy class: 0.2% Basic  Serial number: MT-1011A383-01/ MT-1011A456-01  Calibration frequency: Annually  Calibration dates: 13 October 2011, 18 September 2012 and 09 September 2013  Validity: 08 September 2014.</p> <p>Main power meter and Backup power meter in Oaxaca II Substation  Type: Bidirectional  Accuracy class: 0.2% Basic  Serial number: MT-1011A453-01/ MT-1011A560-01  Calibration frequency: Annually  Calibration dates: 14 October 2011, 19 September 2012 and 09 September 2013  Validity: 08 September 2014.</p> <p>Main power meter and Backup power meter in Oaxaca IV Substation  Type: Bidirectional  Accuracy class: 0.2% Basic  Serial number: MT-1011A462-01/ MT-1011A388-01  Calibration frequency: Annually  Calibration dates: 14 October 2011, 19 September 2012 and 09 September 2013  Validity: 08 September 2014.</p>
Measuring/ Reading/ Recording frequency:	Measurement equipment: Power meters Measuring: Every 5 minutes Recording: Monthly

Calculation method (if applicable):	<p>Calculated from energy exported by the project to the grid and energy imported by the project from the grid, directly obtained from the metering equipment installed in the Ixtepec substation.</p> <p>Oaxaca II Wind Farm has two meters (1 main, 1 backup) at the exit of the wind farm and two meters (1 main, 1 backup) in Ixtepec Substation. The project activity shares the transmission line to Ixtepec Substation with Oaxaca IV wind project. The energy production from the project activity is determined by CFE by means of CFE certified meters located in the Ixtepec Substation.</p> <p>The metering is cross-checked with the invoice of sales. The net electricity generation is measured in the meter installed at the delivery point of energy. Due to the project activity shares the transmission line with another project; for this reason the meter in the substation uses a software that calculates the net electricity exported to the grid by the project activity:</p> $EG_{facility,y} = \left( \frac{EG_{project,y}}{EG_{project,y} + EG_{another,y}} * EG_{output,y} \right) - EG_{import,y}$ <p><math>EG_{output,y}</math> <math>EG_{import,y}</math> <math>EG_{project,y}</math> and <math>EG_{another,y}</math> are measured directly by electricity meters.</p>
QA/QC procedures:	This data is directly used for calculation of emissions reduction. The metering equipment is properly calibrated and checked periodically for accuracy, to ensure that any error resulting from such equipment does not exceed +0.2% of full-scale rating. To guarantee QA/QC it is double checked by receipt of electricity sales.
Purpose of data:	Calculation of Project baseline calculations
Additional comment:	As a conservative approach for the calculation of this variable, the PP uses the minimum value for $EG_{output,y}$ and $EG_{project,y}$ from main and backup meter and the maximum value for $EG_{import,y}$ and $EG_{another,y}$ from main and backup meter

<b>Data / Parameter:</b>	<b><math>EG_{output,y}</math></b>
Unit:	MWh/yr
Description:	Electricity supplied to the grid by the proposed project and 'another project B' during year y
Measured/ Calculated / Default:	Measured
Source of data:	Electricity meters located in Ixtepec Substation this meter has the serial number MT-1011A383-01 (Main Meter) and MT-1011A456-01 (Backup meter)
Value(s) of monitored parameter:	1,476,301 MWh

Monitoring equipment:	Main power meter and Backup power meter in Ixtepec Potencial Substation Type: Bidirectional Accuracy class: 0.2% Basic Serial number: MT-1011A383-01/ MT-1011A456-01 Calibration frequency: Annually Calibration dates: 13 October 2011, 18 September 2012 and 09 September 2013 Validity: 08 September 2014.
Measuring/ Reading/ Recording frequency:	Measurement equipment: Power meters Measuring: Every 5 minutes Recording: Monthly
Calculation method (if applicable):	N/A
QA/QC procedures:	This data is directly used for calculation of emissions reduction. The metering equipment is properly calibrated and checked periodically for accuracy, to ensure that any error resulting from such equipment does not exceed +0.2% of full-scale rating. To guarantee QA/QC it is double checked by receipt of electricity sales.
Purpose of data:	Calculation of Project baseline calculations
Additional comment:	The data is archived electronically. Archived data will be kept during the crediting period and two years later.

<b>Data / Parameter:</b>	<b>EG<sub>import,y</sub></b>
Unit:	MWh/yr
Description:	Electricity purchased from the grid by the proposed project and 'another project B' during year y
Measured/ Calculated / Default:	Measured
Source of data:	Electricity meters located in Ixtepec Substation this meter has the serial number MT-1011A383-01 (Main Meter) and MT-1011A456-01 (Backup meter)
Value(s) of monitored parameter:	3,450 MWh
Monitoring equipment:	Main power meter and Backup power meter in Ixtepec Potencial Substation Type: Bidirectional Accuracy class: 0.2% Basic Serial number: MT-1011A383-01/ MT-1011A456-01 Calibration frequency: Annually Calibration dates: 13 October 2011, 18 September 2012 and 09 September 2013 Validity: 08 September 2014.
Measuring/ Reading/ Recording frequency:	Measurement equipment: Power meters Measuring: Every 5 minutes Recording: Monthly
Calculation method (if applicable):	N/A

QA/QC procedures:	This data is directly used for calculation of emissions reduction. The metering equipment is properly calibrated and checked periodically for accuracy, to ensure that any error resulting from such equipment does not exceed +0.2% of full-scale rating. To guarantee QA/QC it is double checked by receipt of electricity sales.
Purpose of data:	Calculation of Project baseline calculations
Additional comment:	The data is archived electronically. Archived data will be kept during the crediting period and two years later. In order to be conservative $EG_{import,y}$ is fully deducted including the electricity imported from the grid by 'another project B'

<b>Data / Parameter:</b>	$EG_{project,y}$
Unit:	MWh/yr
Description:	Electricity measured by meters installed at the project site Oaxaca II substation
Measured/ Calculated / Default:	Measured
Source of data:	Electricity meters located in Oaxaca II Substation this meter has the serial number MT-1011A453-01 (Main Meter) and MT-1011A560-01 (Backup meter)
Value(s) of monitored parameter:	704,844 MWh
Monitoring equipment:	Main power meter and Backup power meter in Oaxaca II Substation Type: Bidirectional Accuracy class: 0.2% Basic Serial number: MT-1011A453-01/ MT-1011A560-01 Calibration frequency: Annually Calibration dates: 14 October 2011, 19 September 2012 and 09 September 2013 Validity: 08 September 2014.
Measuring/ Reading/ Recording frequency:	Measurement equipment: Power meters Measuring: Every 5 minutes Recording: Monthly
Calculation method (if applicable):	N/A
QA/QC procedures:	This data is directly used for calculation of emissions reduction. The metering equipment is properly calibrated and checked periodically for accuracy, to ensure that any error resulting from such equipment does not exceed +0.2% of full-scale rating. To guarantee QA/QC it is double checked by receipt of electricity sales.
Purpose of data:	Calculation of Project baseline calculations
Additional comment:	The data is archived electronically. Archived data will be kept during the crediting period and two years later.

<b>Data / Parameter:</b>	$EG_{another,y}$
Unit:	MWh/yr
Description:	Electricity measured by meters installed at 'another project B' project site substation

Measured/ Calculated / Default:	Measured
Source of data:	Electricity meters located in Oaxaca IV Substation this meter has the serial number MT-1011A462-01 (Main Meter) and MT-1011A388-01 (Backup meter)
Value(s) of monitored parameter:	783,008 MWh
Monitoring equipment:	Main power meter and Backup power meter in Oaxaca IV Substation Type: Bidirectional Accuracy class: 0.2% Basic Serial number: MT-1011A462-01/ MT-1011A388-01 Calibration frequency: Annually Calibration dates: 14 October 2011, 19 September 2012 and 09 September 2013 Validity: 08 September 2014.
Measuring/ Reading/ Recording frequency:	Measurement equipment: Power meters Measuring: Every 5 minutes Recording: Monthly
Calculation method (if applicable):	N/A
QA/QC procedures:	This data is directly used for calculation of emissions reduction. The metering equipment is properly calibrated and checked periodically for accuracy, to ensure that any error resulting from such equipment does not exceed +0.2% of full-scale rating. To guarantee QA/QC it is double checked by receipt of electricity sales.
Purpose of data:	Calculation of Project baseline calculations
Additional comment:	The data is archived electronically. Archived data will be kept during the crediting period and two years later.

### D.3. Implementation of sampling plan

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N/A

## 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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Baseline emissions are CO<sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due the project activity. In order to obtain these emissions it is necessary to calculate and emission factor *ex-ante*, which is the result from an Operative Margin and a Build Margin emission factor. As it is explained in the PDD, the results for these margins are obtained using the following formulas.

$$EF_{OM,y} = \frac{\sum_{i,j} F_{i,j,y} \times COEF_{i,j}}{\sum_j GEN_{j,y}}$$

Where:

- $EF_{OM,y}$  = Operative margin CO<sub>2</sub> emissions factor in year  $y$  (tCO<sub>2</sub>/MWh)  
 $F_{i,i,y}$  = Consumption of fuel  $i$  (in TJ) by fuel sources  $j$  in year  $y$ .  
 $COEF_{i,i,y}$  = CO<sub>2</sub> emission coefficient of fuel  $i$  in tCO<sub>2</sub>/TJ.  
 $GEN_{i,y}$  = Electricity in MWh delivered to the grid by the  $j$  source.  
 $j$  = Refers to the power sources delivering electricity to the grid, not including low-operating cost and must run power plants, and including imports to the grid.

$$EF_{BM,y} = \frac{\sum_{i,m} F_{i,m,y} \times COEF_{i,m}}{\sum_m GEN_{m,y}}$$

Where:

- $EF_{BM,y}$  = Build margin CO<sub>2</sub> emissions factor in year  $y$  (tCO<sub>2</sub>/MWh)  
 $F_{i,m,y}$  = Consumption of fuel  $i$  (in TJ) by fuel sources  $m$  in year  $y$ .  
 $COEF_{i,m,y}$  = CO<sub>2</sub> emission coefficient of fuel  $i$  in tCO<sub>2</sub>/TJ.  
 $GEN_{i,y}$  = Electricity in MWh delivered to the grid by the  $j$  source.  
 $m$  = Refers to the power units included in the build margin.

Once determined these coefficients, the emission factor can be calculated using the formula:

$$EF_{grid,CM,y} = w_{OM} \times EF_{OM,y} + w_{BM} \times EF_{BM,y}$$

The values used for  $w_{OM}$  and  $w_{BM}$  are indicated by the methodology for wind farm projects.

***The emission factor for the grid is finally calculated and there is no need to update it during the project crediting period. The grid emission factor value obtained was 0.5805 tCO<sub>2</sub>/MWh.***

To conclude this section, using the value mentioned before it is possible to calculate the baseline emissions in one year.

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

Where:

- $BE_y$  = Baseline emissions in year  $y$  (tCO<sub>2</sub>/yr)  
 $EG_{facility,y}$  = Net electricity generated and delivered to the grid as a result of the implementation of the CDM project activity in year  $y$  (MWh).  
 $EF_{grid,CM,y}$  = Emission factor for the grid (tCO<sub>2</sub> / MWh)

OAXACA II Wind Energy Project							
	METER READINGS (*)				EG facility,y		
PERIOD	EGoutput,y	EG project,y (Oaxaca II)	EG another,y (Oaxaca IV)	EG import,y	CALCULATION EGfacility,y	RECEIPT OF SALES	MINIMUM VALUE
APRIL 2012	49,381	23,224	26,527	188	22,863	23,072	22,863
MAY 2012	48,578	23,101	25,854	226	22,697	22,928	22,697
JUNE 2012	14,362	6,195	8,273	479	5,671	6,152	5,671

JULY 2012	92,572	42,345	50,925	53	41,975	42,026	41,975
AUGUST 2012	32,704	14,230	18,691	259	13,877	14,142	13,877
SEPTEMBER 2012	58,926	26,282	33,079	235	25,854	26,094	25,854
OCTOBER 2012	97,388	45,071	53,054	41	44,691	44,740	44,691
NOVEMBER 2012	122,331	60,372	62,998	-	59,863	59,870	59,863
DECEMBER 2012	79,272	38,804	41,131	141	38,341	38,495	38,341
JANUARY 2013	101,697	50,744	51,797	49	50,277	50,338	50,277
FEBRUARY 2013	62,053	30,746	31,832	112	30,376	30,489	30,376
MARCH 2013	85,923	43,618	42,992	96	43,176	43,273	43,176
APRIL 2013	44,050	22,128	22,284	140	21,808	21,948	21,808
MAY 2013	44,435	21,669	23,109	198	21,305	21,504	21,305
JUNE 2013	31,892	13,992	18,099	243	13,662	13,909	13,662
JULY 2013	61,896	29,604	32,712	148	29,257	29,409	29,257
AUGUST 2013	73,872	33,860	40,567	100	33,508	33,613	33,508
SEPTEMBER 2013	7,539	2,778	4,875	427	2,309	2,745	2,309
OCTOBER 2013	67,322	30,126	37,698	185	29,718	29,821	29,718
NOVEMBER 2013	98,232	47,012	51,974	52	46,602	46,654	46,602
DECEMBER 2013	94,299	46,236	48,782	53	45,833	45,887	45,833
JANUARY 2014	107,578	52,708	55,754	24	52,254	52,708	52,254
TOTAL	1,476,301	704,844	783,008	3,450			695,917

EG <sub>facility,y</sub>	695,917	MWh
EF <sub>grid,CM,y</sub>	0.5805	tCO <sub>2</sub> /MWh
Baseline emissions	403,979	tCO <sub>2</sub>

(\*)To be conservative it was used the Minimum value for EG<sub>output,y</sub> and EG<sub>project,y</sub> from main and backup meter and the maximum value for EG<sub>import,y</sub> and EG<sub>another,y</sub> from main and backup meter and **EG<sub>import,y</sub>** is fully deducted including the electricity imported from the grid by 'another project B.

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

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Oaxaca II Wind Energy project is a renewable source of electricity generation and doesn't involve the use of fossil fuel for the energy production. Consequently, there are not emissions related to the activity of the project.

$$PE_y = 0 \text{ tCO}_2e$$

## E.3. Calculation of leakage

>>

For this kind of projects, the main emissions potentially giving rise to leakage are emissions due to activities such power plant construction and upstream emissions from fossil fuel (e.g. extraction, processing, and transportation). As a result these emissions sources are neglected and a zero emission leakage is considered for the project.



$$LE_y = 0 \text{ tCO}_2\text{e}$$

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

Using the values obtained before, the total amount of reduced emissions is calculated as follows:

$$ER_y = BE_y$$

Where:

$ER_y$  = Reduced emissions in year  $y$  (tCO<sub>2</sub>/yr)

$BE_y$  = Baseline emissions in year  $y$  (tCO<sub>2</sub>/yr)

Item	Baseline emissions or baseline net GHG removals by sinks (t CO <sub>2</sub> e)	Project emissions or actual net GHG removals by sinks (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	Emission reductions or net anthropogenic GHG removals by sinks (t CO <sub>2</sub> e)
Total	403,979	0	0	403,979

#### 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
Emission reductions or GHG removals by sinks (t CO <sub>2</sub> e)	441,498	403,979

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

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The actual emission reductions achieved during the current monitoring period is below the total estimated in the registered PDD. The main reasons from the variations are directly to the wind conditions during the monitoring period that reduces the electricity generation. The emission reductions of this monitoring period are 8.50% lower than the emission reductions that appear 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

Item	Actual values achieved up to 31 December 2012	Actual values achieved from 1 January 2013 onwards
Emission reductions or GHG removals by sinks (t CO <sub>2</sub> e)	160,121	243,858

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.2	5 November 2013	Editorial revision to correct table in page 1.
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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