

**MONITORING REPORT FORM (F-CDM-MR)**
Version 02.0**MONITORING REPORT**

Title of the project activity	CECIC Urumqi Tuoli Phase I Wind Farm Project
Reference number of the project activity	4421
Version number of the monitoring report	Version 01
Completion date of the monitoring report	01/01/2013
Registration date of the project activity	25/02/2011
Monitoring period number and duration of this monitoring period	1st monitoring period (01/05/2011-31/12/2012, both days inclusive)
Project participant(s)	CECIC Wind Power (Xinjiang) Co., Ltd., P.R.China (host); Carbon Resource Management S.A., United Kingdom of Great Britain and Northern Ireland.
Host Party(ies)	P.R.China
Sectoral scope(s) and applied methodology(ies)	Sectoral scope1, Energy Industries (renewable-/non-renewable sources). Approved Consolidated Methodology ACM0002, “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, Version 12.3.0
Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD	195,259 tCO ₂ e
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	88,811 tCO ₂ e

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

>>

CECIC Urumqi Tuoli Phase I Wind Farm Project (hereinafter referred as “the Project”) is located in Tuoli Town, Urumqi County, Xinjiang Uygur Autonomous Region. The Project is developed by CECIC Wind Power (Xinjiang) Co., Ltd.. The Project install and operate 33 wind turbines with a capacity of 1,500 kW each; the total installed capacity is 49.5 MW. The Project is expected to deliver on average approximately 125,532 MWh (net) of electricity per year to the Northwest Power Grid (NWPG). The purpose of the Project is the generation of electricity from wind and the supply of this electricity to the NWPG.

The project scenario is the installation of 49.5 MW of renewable energy power generation capacity, and the supply to the NWPG of 125,532 MWh (net) of electricity generated from renewable energy. The baseline scenario, which is the same as the scenario existing prior to the implementation of the Project, is the generation of electricity by grid-connected power plants. As the NWPG is dominated by thermal power generation, the establishment of the Project can lead to greenhouse gas (GHG) emission reductions. Following the baseline methodology, the emission reductions are estimated to be approximately 116,644 tonnes of CO₂ equivalent (tCO₂e) per year once the Project is fully operational.

The Project started construction on 01/09/2010. The first wind turbine of the Project commissioning was started on 29/01/2012. The Project started fully commissioning on 05/04/2012.

This is the first monitoring period of the Project which cover period of from 01/05/2011 to 31/12/2012. The total emission reduction of the 1st monitoring period is: 88,811 tCO₂e.

A.2. Location of project activity

>>

The Project site is located in Tuoli Town, Urumqi County, Xinjiang Uygur Autonomous Region, the People’s Republic of China. It is located at Latitude from N 43.4731° to N 43.5042° and Longitude from E 87.7092° to E 87.7561°. The altitude of the Project site ranges from between 1150 m to 1345 m above the sea level. More details shown as follow figure1.

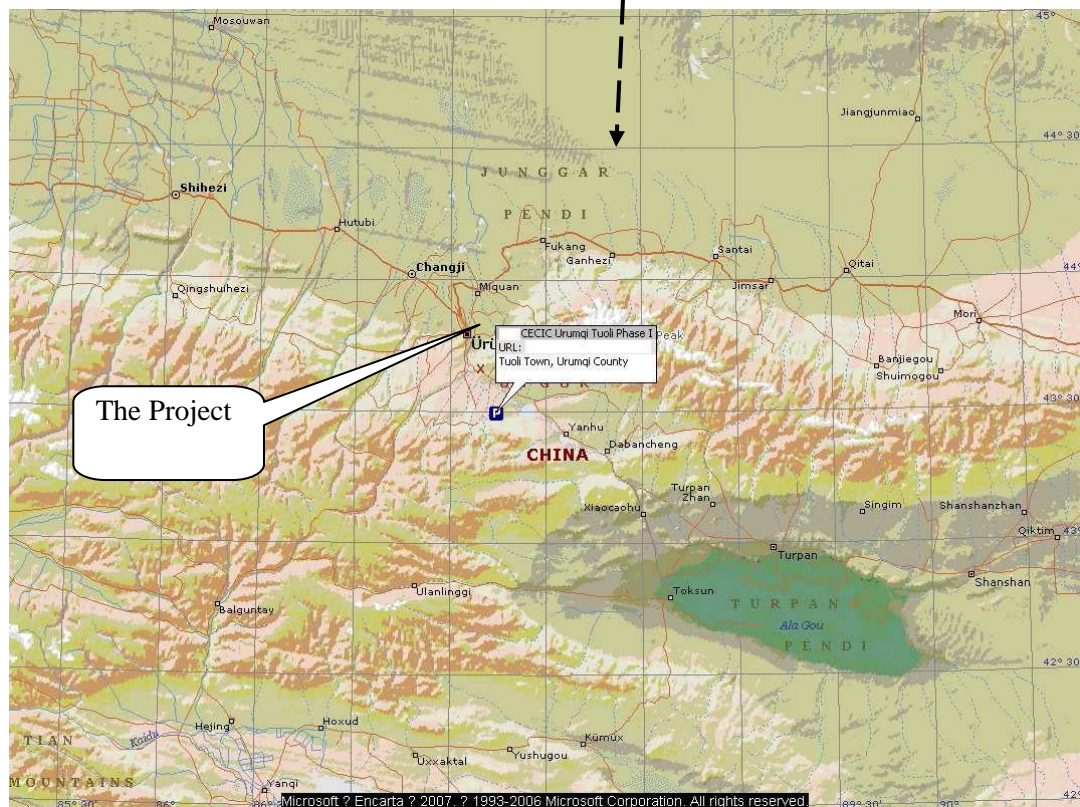
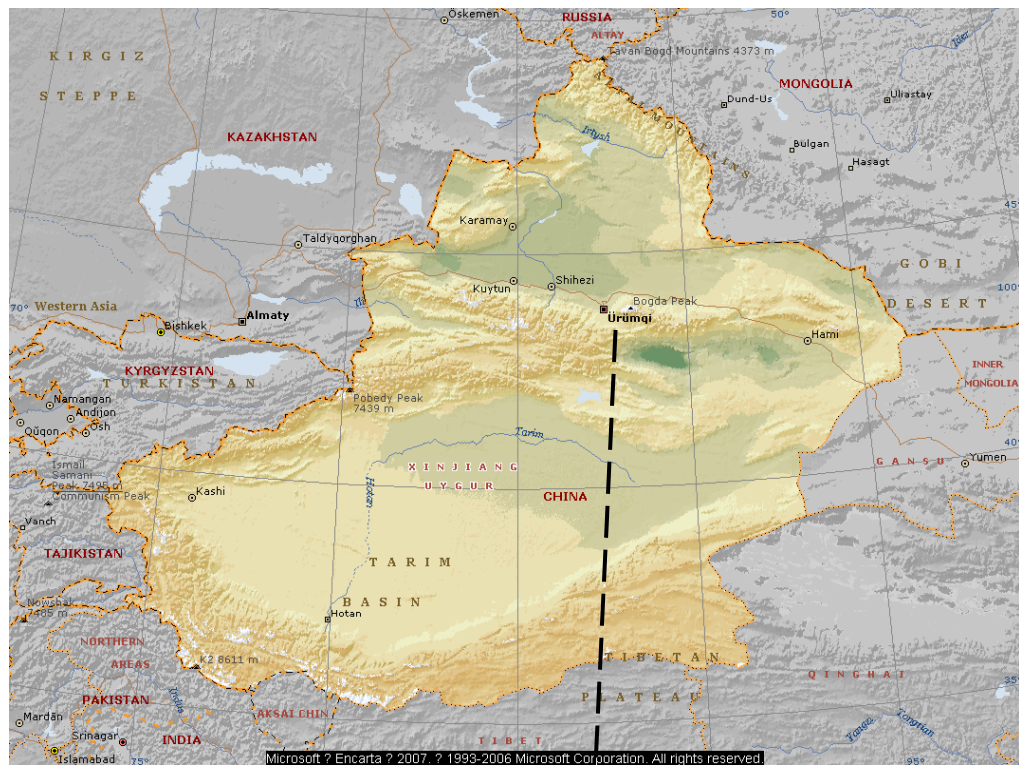


Figure1. Location of the Project

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)
P.R.China (Host)	CECIC Wind Power (Xinjiang) Co., Ltd.	No
United Kingdom of Great Britain and Northern Ireland	Carbon Resource Management S.A.	No

A.4. Reference of applied methodology

>>

The approved methodology and tool applied to the Project is:

Approved consolidated baseline and monitoring methodology ACM0002: “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” (Version 12.3.0);

“Tool for the demonstration and assessment of additionality” (Version 05.2);

“Tool to calculate the emission factor for an electricity system” (version 02)

Reference: UNFCCC website:

<http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L>

A.5. Crediting period of project activity

>>

The Project employs the renewable crediting period (3×7yrs), the first crediting period of the project is from 01/05/2011 to 30/04/2018.

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

>>

The Project started construction on 01/09/2010. The first wind turbine of the Project commissioning was started on 29/01/2012. The Project started fully commissioning on 05/04/2012. The electricity generated by the Project is delivered to NWPG.

During this monitoring period, the Project is operated and implemented smoothly. There have been no emergencies (including of overhaul times, downtimes of equipment, exchange of equipment, etc.) happened to the monitoring system in this monitoring period, also no events or situations occurred during the monitoring period, which may impact the applicability of the methodology.

Total 33 sets of wind turbines with a capacity of 1,500 kW each, are installed in the Project, forming 49.5 MW of total capacity. These wind turbines are manufactured in China by Xinjiang Goldwind Science & Technology Co., Ltd. and the model type of these wind turbines is GW77/1500kW. The main technology parameter of this type of wind power turbine can be found at Table1, which is in line with the specification made in the PDD.

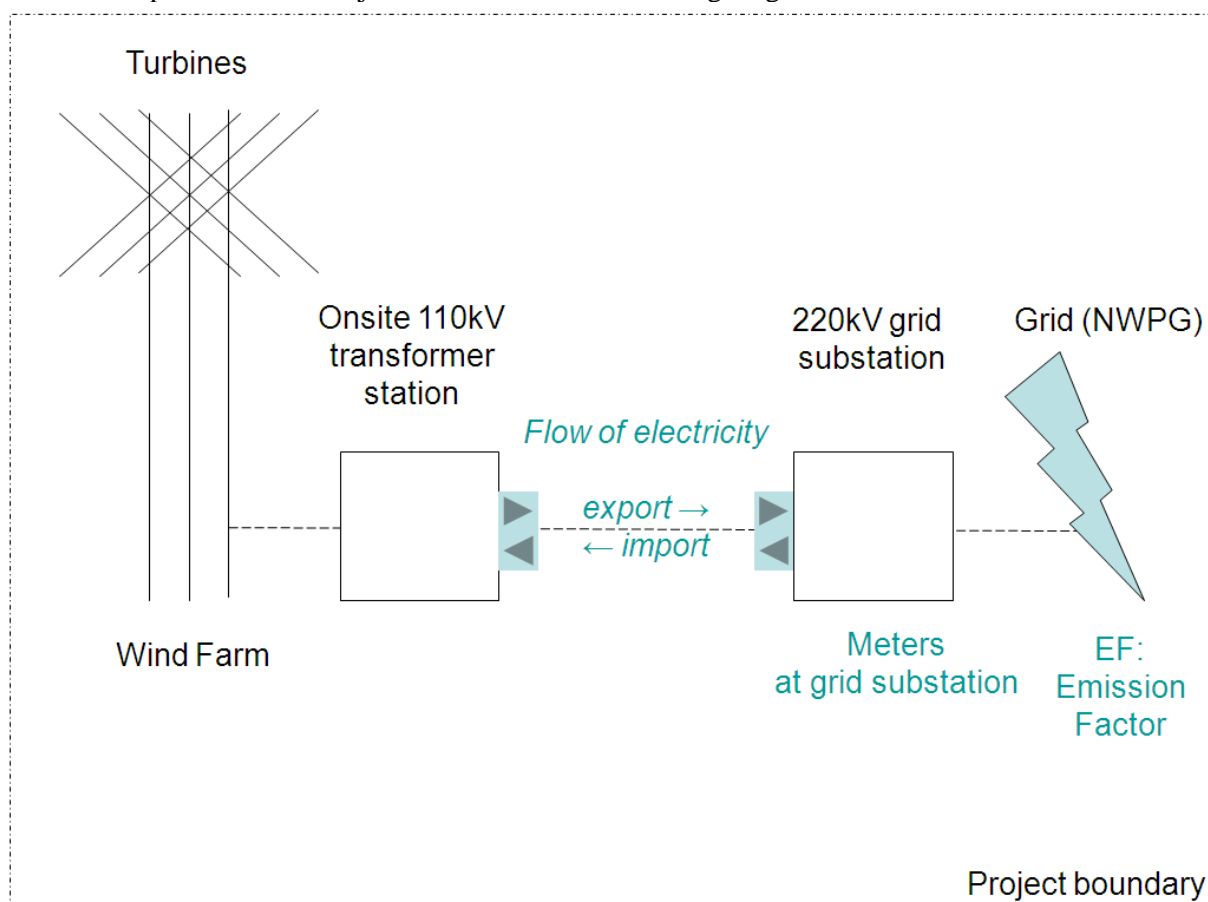
Table1 Technology parameter of WTGs for the Project

Item	Specification
Manufacturer	Xinjiang Goldwind Science & Technology Co., Ltd.
Type	GW77/1500kW
Power Rating	1500 kW
Rotor Diameter	77m

Hub height (Centre)	65m
Cut-in wind speed	3 m/s
Rating wind speed	12 m/s
Cut-out wind speed	22 m/s
Designed Life	20 years

Each turbine has a transformer from 690 V to 35 kV, and are connected with the 110 kV substation on the wind farm. The onsite substation is connected to the grid substation via 110 kV transmission line. All the electricity generated by the wind farm will be transferred to the NWPG via the grid substation.

The technical process in the Project can be shown as following diagram:



B.2. Post registration changes

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

>>

There are no any temporary deviations have been applied during this monitoring period.

B.2.2. Corrections

>>

There are no any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report.

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

>>

There are no any permanent changes from the registered monitoring plan or applied methodologies have been approved during this monitoring period or submitted with this monitoring report.

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

>>

There are no any changes to the project design of the project activity have been approved during this monitoring period or submitted with this monitoring report.

B.2.5. Changes to start date of crediting period

>>

There no any changes to the start date of the crediting period have been approved during this monitoring period or submitted with this monitoring report.

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

>>

Not Applicable

SECTION C. Description of monitoring system

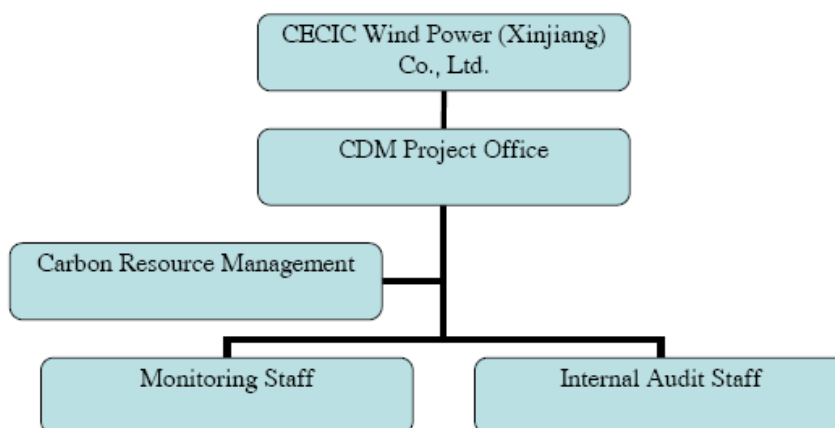
>>

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

1. Monitoring organization and Responsibility

The responsibility for monitoring lies with CECIC Wind Power (Xinjiang) Co., Ltd. who operates the Project. The company established a CDM Project Management Office (PMO) and assigned dedicated people responsible for the monitoring and reporting of the generation and emission reductions of the Project.

The operating and management structure is illustrated as followed:



2. Description of the monitoring system

The electricity generated by the Project feeds to the Dafeng 110kV/220kV substation through one 110kV transmission lines, then to NWPG after upgraded by a 35kV/110kV transformer within the Project site. The Quantity of net electricity supplied by the project to the grid ($EG_{facility,y}$) is continuous monitored through two bi-directional meters (one is main meter, the other is backup meter) installed at the Dafeng 110kV/220kV substation.

Both the electricity supply to the grid by the Project ($EG_{facility,export,y}$) and the electricity imports from the grid by the Project ($EG_{facility,import,y}$) are continuously monitored through the main meter in the Dafeng 110kV substation. The net electricity supplied by the Project to the grid ($EG_{facility,y}$) is the difference of the electricity exports to the grid and imports from the grid ($EG_{facility,export,y} - EG_{facility,import,y}$).

Designed personnel in Dafeng substation read and record the reading of the meters mentioned above daily. Accumulated data was reported to the Project Owner on a monthly basis. For the electricity exports to the grid by the Project, the cut off time is 24:00 of 27th each month, consider of the transmission line loss and based on the calculation method description in the PPA, the grid company issued the Electricity Transaction Notes (ETNs) to the project company. After confirming the numbers on the ETNs, the project company issue sales receipts for the electricity exports to the grid by the Project to the grid company subsequently on a monthly basis.

For the electricity imports from the grid by the Project, the cut off time is 24:00 of 20th each month, consider of the transmission line loss and based on the calculation method description in the PPA, the grid company issued the Electricity Transaction Notes (ETNs) to the project company. After confirming the numbers on the ETNs, the grid company issue the sales receipts for the electricity imports from the grid by the Project to the project company on a monthly basis.

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

3. Installation of electricity meters

Both the main meter and backup meter are installed in accordance with industry standards (Chinese electric industry regulation DL/T448). Any error resulting from the meter shall not exceed 0.5%, which is in line with the industry standards.

- Main meter, is installed at the grid substation.
- Backup meter, is installed at the grid substation.

4. Meters Calibrations

The metering equipments are calibrated and checked at least annually in accordance with related regulations and rules. Calibration is carried out by authorized and qualified calibration entity. The calibration record of the electricity measure-related meters can be found at Table2.

Table2. Calibration record of the meters

Serial No.	Accuracy	Calibration date	Calibration due on	Calibration frequency	Calibrated by
000002141037 Main meter	0.2s	24/08/2011	23/08/2012	Annually	Metrological Centre of Urumqi Electricity Bureau
		23/02/2012	22/02/2013		
000002141035 Backup meter	0.2s	24/08/2011	23/08/2012	Annually	Metrological Centre of Urumqi Electricity Bureau
		23/02/2012	22/02/2013		

5. Emergency Procedures

Should any previous months reading of the main meter be inaccurate by more than the allowable error, or otherwise functioned improperly, the net generation output shall be determined by (a) first, by reading



backup meter, unless a test by either party reveals it is inaccurate; (b) if the backup system is not with acceptable limits of accuracy or operation is performed improperly the project company and grid company shall jointly prepare a reasonable and conservative estimate of the correct reading, and provide sufficient evidence that this estimation is reasonable and conservative for verification by the DOE; and (c) if the grid company and the project company fail to agree then the matter will be referred for arbitration according to agreed procedures.

The Project is operated and implemented smoothly during this monitoring period. Neither emergencies were happened to the monitoring system, nor events or situations were occurred during the monitoring period.

SECTION D. Data and parameters

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

Data/Parameter	EF_{grid,CM,y}
Unit	tCO ₂ e/MWh
Description	Baseline emission factor: the combined emission factor of the project grid system.
Source of data	Source from the Section B.6 of the registered PDD for the Project.
Value(s) applied	0.9292
Purpose of data	Calculation of baseline emissions.
Additional comment	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_{facility,y}
Unit	MWh/yr
Description	Quantity of net electricity supplied by the project to the grid in year y
Measured/Calculated/Default	Measured
Source of data	The meter reading records of the main bi-directional electricity meter, which monitoring the electricity supply to the grid (EG _{facility,export,y}) and imports from the grid (EG _{facility,import,y}). The net electricity supplied by the Project to the grid (EG _{facility,y}) is the difference of the electricity exports to the grid and imports from the grid (EG _{facility,export,y} - EG _{facility,import,y}).
Value(s) of monitored parameter	The quantity of net electricity supplied by the Project to the grid during this monitoring period is 95,578.946 MWh. The electricity exports to the grid by the Project is 95,948.546 MWh, and the electricity imports from the grid by the Project is 369.600 MWh.
Monitoring equipment	More detail, please refer to Section C table2.
Measuring/Reading/Recording frequency	Measuring continuously/Recording monthly
Calculation method (if applicable)	-
QA/QC procedures	<p>The metering equipments were calibrated annually and checked yearly by qualified third party for accuracy according to the appropriate industry standards of DL/T448-2000.</p> <p>The measurement results are cross-checked with records for sold electricity. The accuracy of the meters meets the national standard, and the metering equipments shall have sufficient accuracy so that any error resulting from such equipment shall not exceed 0.5%.</p> <p>Monthly supplied generation data were approved and signed off by CDM manager before it is accepted and stored. This audit will check compliance with operational procedures in this monitoring plan.</p> <p>This internal audit also can identify potential improvements to procedures to improve monitoring and reporting in future years. If such improvements are proposed these will be reported to the DOE and only operated after approval for the DOE.</p>
Purpose of data	Calculation of baseline emissions.
Additional comment	-

There are no additional capacities, which could be either an additional wind farm or expansion of the existing wind farm, added to the grid at the same point as the Project, and shared transmission facilities with the Project during this monitoring period. So, no other more parameters are monitored during this monitoring period.

D.3. Implementation of sampling plan

>>

Not Applicable

SECTION E. Calculation of emission reductions or GHG removals by sinks**E.1. Calculation of baseline emissions or baseline net GHG removals by sinks**

>>



According to ACM0002 and the registered PDD of the Project, The baseline emission BE_y during the monitoring period results from:

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

The Project is the installation of a new grid-connected renewable power plant at a site where no renewable power plant was operated prior to the implementation of the Project. So,:

$$EG_{PJ,y} = EG_{facility,y}$$

Accordingly,

$$\begin{aligned} BE_y &= EG_{PJ,y} \times EF_{grid,CM,y} \\ &= EG_{facility,y} \times EF_{grid,CM,y} \end{aligned}$$

Where:

BE_y is the baseline emissions in year y (tCO_2/yr);

$EG_{PJ,y}$ is the quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr);

$EF_{grid,CM,y}$ is the combined margin baseline emission factor of the NWPG;

$EG_{facility,y}$ is the quantity of net electricity generation supplied by the Project plant/unit to the grid in year y (MWh/yr)..

The monthly electricity data is listed in following table3:

**Table3. Calculation of the quantity of net electricity supplied to the grid by the Project**

Period	Electricity exported to the grid by the Project			Electricity imported from the grid by the Project			EG _{facility,y}
	data from meter readings	data from the sales receipts	data used to calculate the ER	data from meter readings	data from the sales receipts	data used to calculate the ER	
	A	B	C=MIN(A,B)	D	E*	F=MAX(D,E)	
01/05/2011-28/01/2012	0	0	0	0	369.600	369.600	-
29/01/2012-24/02/2012	3,887.400	3,883.849	3,883.849	39.600			
25/02/2012-27/03/2012	7,154.400	7,117.252	7,117.252	66.000			
28/03/2012-27/04/2012	6,190.800	6,160.443	6,160.443	26.400			
28/04/2012-27/05/2012	10,804.200	10,765.256	10,765.256	26.400			
28/05/2012-27/06/2012	9,985.800	9,952.047	9,952.047	13.200			
28/06/2012-27/07/2012	7,986.000	7,953.422	7,953.422	19.800			
28/07/2012-27/08/2012	8,382.000	8,359.569	8,359.569	19.800			
28/08/2012-27/09/2012	9,233.400	9,210.730	9,210.730	19.800			
28/09/2012-27/10/2012	7,022.400	7,002.799	7,002.799	19.800			
28/10/2012-27/11/2012	15,866.400	15,844.093	15,844.093	19.800			
28/11/2012-27/12/2012	8,302.800	8,273.486	8,273.486	59.400			
28/12/2012-31/12/2012	1,425.600	1,425.600	1,425.600	6.600			
Total	96,241.200	95,948.546	95,948.546	336.600	369.600	369.600	95,578.946

*Note: * The value in the column of data from the sales receipts for electricity imports from the grid by the Project, is the total electricity imports from the grid by the Project from 01/05/2011 to 20/01/2013. Due to the cut off time for the electricity imports from the grid by the Project settlement is the 24:00 of 27th each month (it's 24:00 24th in each February), For conservative, the total electricity imports from the grid by the Project from 01/05/2011 to 20/01/2013 is used for ER calculation instead.*

The data in this table has been counter-checked against with the sales receipts.

The baseline emission during this monitoring period calculated as following:

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

Table4. Baseline emissions

Period	EG _{facility,y} (MWh)	EF _{grid,CM,y} (tCO ₂ e/MWh)	BE _y (tCO ₂ e)
01/05/2011- 31/12/2012	95,578.946	0.9292	88,811

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

>>

Project emission (PE_y) is 0 tCO₂e as per the registered PDD.

E.3. Calculation of leakage

>>

Leakage (L_y) is not considered as per the registered PDD.

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

Time Period	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	Emission reductions or net anthropogenic GHG removals by sinks (tCO ₂ e)
Total (01/05/2011-31/12/2012)	88,811	0	0	88,811

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

The estimated annual emission reduction in the registered PDD is 116,644 tCO₂e which is equals to 319.5726 tCO₂e per day. So, the estimated emission reduction is 195,259 tCO₂e in 611 days (total days of this monitoring period) based on the registered PDD. The actual emission reductions of the Project during this period are 88,811 tCO₂e.

Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (tCO₂e)	195,259 ¹	88,811

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

>>

The actual emission reductions during this monitoring period are 88,811 tCO₂e, 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.

¹ 195,259 tCO₂e = 116,644 tCO₂e * (611days/365days)

**History of the Monitoring Report**

Version	Date	Nature of revision
01	01/01/2013	Initial adoption.

History of the document

Version	Date	Nature of revision
02.0	EB 66 13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	EB 54, Annex 34 28 May 2010	Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance		