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 01
Date: 12/04/2011

28MW Jinkouba Hydropower Project
Ref: 1633
2nd Monitoring Period: 27/02/2010-26/02/2011 (first and last days included)

SECTION A. General description of the project activity

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

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The 28MW Jinkouba Hydropower Project ("JHP" or "the project"), a run-of-river hydropower project, is located on Baishuijiang River in Gansu Province, China. The total installed capacity of JHP is 28 MW provided by two 14MW turbines/generators, with an annual net output of 127,900MWh. The electricity of the project is connected to the Northwest Power Grid (NWPG) via Gansu Provincial Power Grid.

The purpose of the project is to utilize the hydrological resources of the Baishuijiang River through construction of a run-of-river hydro project to generate electricity. The electricity generated by the project displaces part of the electricity generated by NWPG which is dominated by coal-fired power plants, and thus greenhouse gas (GHG) emission are expected to be reduced. The estimated annual GHG emission reductions are 108,689 tCO_2e/year.

Table 1 Implementation of the Project

Date	Kay events
20/11/2005	Construction activities started
18/02/2009	Registration date
01/02/2008	The operation starting date
18/02/2009~26/02/2010	The 1st monitoring period
31/03/2011	The 1st verification issued
27/02/2010~26/02/2011	The 2nd monitoring period
30 years	operational lifetime of the project activity

And now, this monitoring report is submitted to start the 2nd periodic verification for the project, aiming at requesting issuance of CERs during the second monitoring period (27/02/2010-26/02/2011). During the monitoring period the net electricity supplied to the grid by the project is 134,343.185 MWh, and the emission reduction achieved is 114,164tCO_2

A.2. Project Participants

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Name of Party involved (*) ((host) indicates a host Party)	Private and/or public entity(ies) project participants (*) (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant (Yes/No)
P.R. China (host)	•Private entity: Jintai Hydropower Co. Ltd of Wen County in Gansu Province	Yes

The project is a unilateral project, the project participant had agreed to the CERs by JHP be firstly transferred into the Chinese National Account in EB, after verified by National Development and Reform Commission(DNA), then transferred out from the account.

A.3. Location of the project activity:

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The project is located on the Baishuijiang River in jinkouba village, Hengdan Township, Wen County, Longnan City, Gansu Province, People's Republic of China. JHP has geographical with the north latitude of 32°50'52" and east longitude of 104°53'18".

A.4. Technical description of the project

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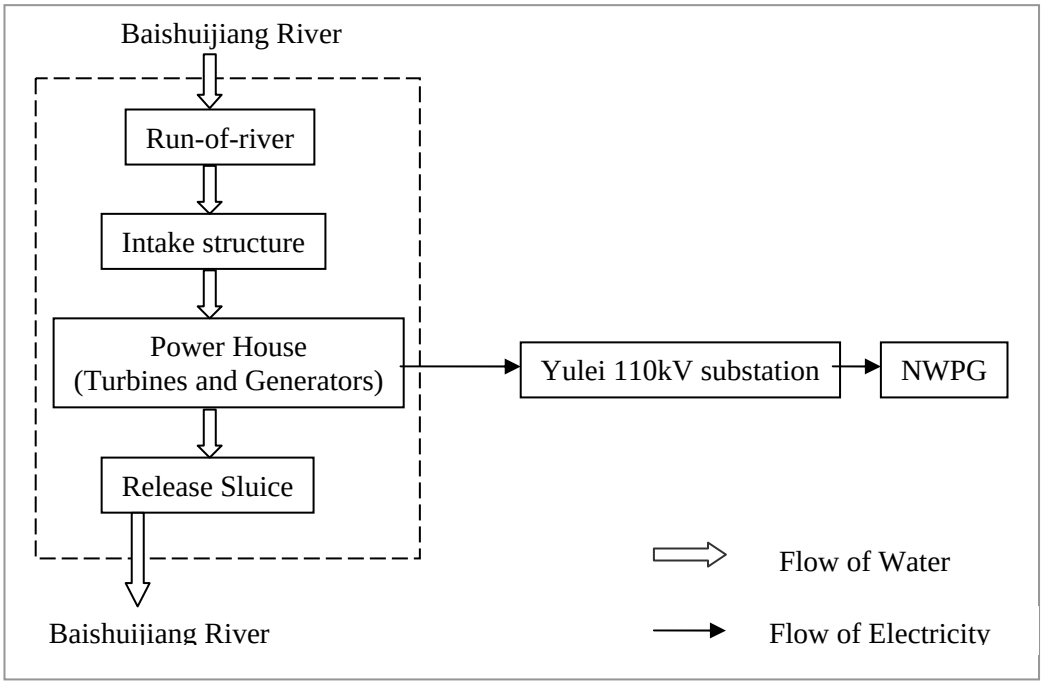
The Jinkouba hydropower station uses run-of-river hydropower technology which converts mechanical energy available in the water flow into electrical energy using hydro turbines and alternators and with a conservative operation life of 30 years. The main constructions of the project include a sand washing sluice, a flood discharge sluice, a gravity dam, an open ditch, a tunnel, a forebay, a penstock, a powerhouse, a tail water ditch and a booster station etc, a small reservoir is formed by barrage during drawing water from river course to an open ditch.

The powerhouse of JHP is composed of two 14MW turbines, generated voltage at the alternators terminals is 10.5 KV, which is stepped-up to 110 KV through a booster station to match the nearest Yulei substation voltage level. Finally the electricity of the project is connected to the Northwest Power Grid (NWPG) via the Yulei 110kV transformer substation. The model of turbines is ZZ660-LH-300, and the model of generators is SF14-28/5100. The other parameters of the turbines and generators are consistent with the registered PDD of the project.



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

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Title of the approved baseline methodology: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ACM0002, version 06).

Title of the approved monitoring methodology: "Consolidated monitoring methodology for zero-emissions grid-connected electricity generation from renewable sources" (ACM0002, version 06).

For more information regarding the baseline methodology and monitoring methodology, please refer to:

http://cdm.unfccc.int/UserManagement/FileStorage/CDMWF_AM_BW759ID58ST5YEEV6WUCN5744MN763

A.6. Registration date of the project activity:

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18/02/2009 (18 Feb 09)

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

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The crediting period is fixed crediting period (10 years) from 18 Feb 09 to17 Feb 19.

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

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The monitoring report was completed by:

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(Not Project Participant).

SECTION B. Implementation of the project activity

B.1. Implementation status of the project activity

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The project consists of 2 sets 14MW hydro turbine and generator units. The project started operation since 01/02/2008. The monitoring activities were conducted strictly in compliance with the baseline methodology and monitoring methodology. Monitoring of the required parameters, data collection and recording has been completed in line with the PDD.

No overhaul or equipment exchange happened during the 2nd monitoring period.

The project activity operates smoothly during the 2nd monitoring period, no events or situations occurred which may impact the applicability of the methodology.

B.2. Revision of the monitoring plan

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The monitoring plan has not been revised.

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

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No deviation applied to this monitoring period.

B.4. Notification or request of approval of changes

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No notification or request of approval of changes from the project activity as described in the registered CDM-PDD.

SECTION C. Description of the monitoring system

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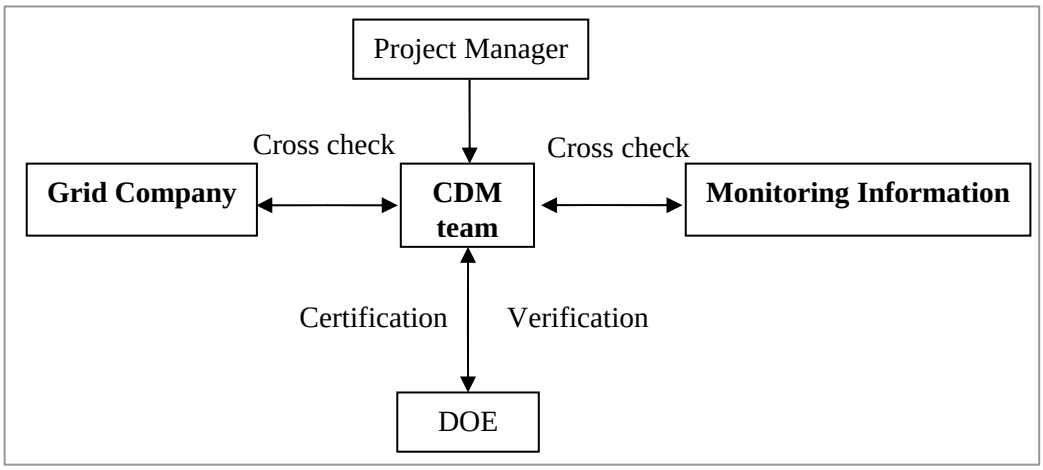
1. Organizational structure, roles and responsibilities

In order to operate and manage the CDM project activities, the project entity-JHCL (Jintai Hydropower Co. Ltd of Wen County in Gansu Province) had constituted detailed rules on CDM project management, the special CDM project manager authorized by the project entity is in charge of all the management works, training and the fulfillment of the Monitoring Plan. There set up a CDM project team, the team assigns qualified persons to measure, compile and archive the necessary data of monitoring plan.

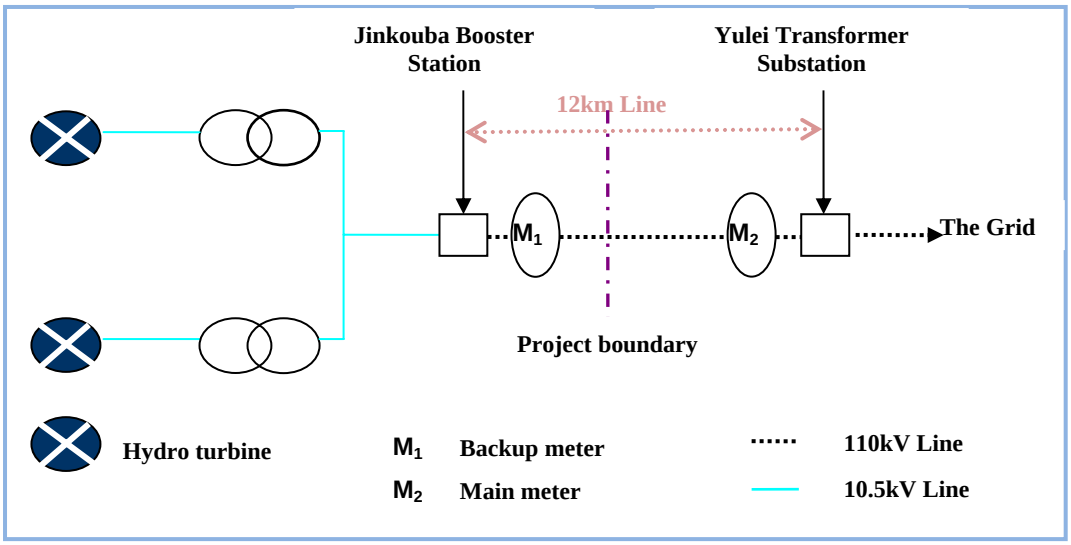
JHCL's CDM project team:
Wang Jinping: director of JHCL, CDM project team leader.
Li Xinbin: chief financial officer of JHCL, CDM project manager.
Zhang Chunxiong: deputy station chief of JHCL, responsible for the implementation of the monitoring system.
Li Jianke: staff of JHCL, monitoring person.
Zhang Wenwei: staff of JHCL, file clerk.

Detailed structure as follows:



2. Monitoring system

According to the requirements in metering of Gansu Electric Power Company (GPEPC) and the monitoring requirements of CDM project, two bi-direction meters (M_1 and M_2) with accuracy of 0.2s are separately installed in Jinkouba station and in Yulei 110kV Substation (interconnection facility connecting to the grid). Thereinto, M_2 installed in Yulei 110kV transformer substation works as the main meter of the monitoring system, which is operated and maintained by GPEPC. M_1 installed in the station 110kv Booster Station works as backup meter of M_2 to monitor the output of electricity (deducting Service power) by the project, which is operated and maintained by PO. The detailed metering system figure was shown below:



3. Data collection procedures

As the emission reduction by the project is determined by the net electricity supplied to the grid, so the electricity supplied to the grid (EG_{ex}) and imported electricity (EG_{im}) by the project are the key data to be monitored. The monthly electricity supplied to the grid and import electricity by the project are monitored on the interface between Jinkouba hydropower station and the grid by automatic monitoring equipment by GPEPC and the project entity mutually.

- During the 2nd periodic monitoring period, The electricity supplied to the gird by the project and imported electricity by the project is mainly based on the monitoring data coming from the main meter (M_2) installed at 110kV Yulei Transformer Substation which monitored regularly by Gansu Electric Power Company. The data is measured continuously, record monthly and archived electronically. At the 24:00 of the third last day of each month, the designated staff of Longnan Electric Power Company, a subsidiary company of Gansu Electric Power Company and the project entity jointly record invoice meter's reading and calculate the monthly electricity. Upon this, the monthly power purchase settlement notice is prepared, which the sales invoice is based on.
- To ensure maximum availability of monitoring data and quality controls of the CDM data, the meter (M_1) installed in Jinkouba 10.5kV/110KV Booster Station works as backup meter for the monitoring system to monitor the output of electricity generation (deducting Service power) and provide useful cross-checks for the invoice meter. The reading of the backup meter (M_1) are recorded electronically once every 15minutes and manually once every 8 hours. Furthermore, the records would be kept in electronic form, and monthly generation data would be printed out for a back up for the improbable event of a computer hazard. When the main meter is found in case of out of action, the readings of the backup meter will serve as the reference for the power purchase settlement notice of the month.

4. Quality Assurance (QA) and Quality Control (QC)

The quality assurance and quality control procedures for reading, maintaining and archiving data are improved as part of this CDM project activity.

- In order to ensure the accuracy and rationality of metering data, the CDM project team is take charge of the audit tasks. All the records (include the electronic files, paper documents, maintenance and calibration data etc.) are reported to the team, so as to judge whether there is bias on plant operation and ensure the on-going process through the defined crediting period in terms of the need for verification on an annual basis.
- Calibrations are carried out annually by Electric Energy Measurement Center of Gansu Provincial Power Company, and then lead seals to ensure the accuracy and impartiality of the meters. Calibration tests records have been maintained for verification.
- In addition, the data required for the calculations of reduce emission for verification is mainly based on the data monitored by invoice meter M_2, and secondary to the data monitored by the M_1 in

power plant. Moreover, the monitoring data by the plant can be cross-checked with the Electricity Sales Invoices issued by Electricity Power Company.

5. Emergency procedures for the monitoring system

In case metering equipment is damaged and no reliable readings can be recorded the project owner will use the following procedure:

- In case invoice meter (M_2) recorded by the grid company are in malfunction, the monitoring data of backup meter (M_1) logged by the project owner will be used to calculate the data for the sales receipts. The monitoring data of backup meter deducts the largest Monthly line loss in the past year. Viz. Monitoring data (M_1) - line loss (the maximum value of Monthly line loss during the past year).
- In case invoice meter (M_2) and backup meter (M_1) are both in malfunction, the electricity supplied to the grid is zero conservatively during the period.

The relevant written materials, electronic files will be submitted in a transparent manner to DOE for verification purposes, and DOE will analysis the probably error data according to the conservative principles and requirements of CDM.

During this monitoring period, monitoring system works smoothly, invoice meter and backup meter are both in good conditions.

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_y
Data unit:	tCO_2e/MWh
Description:	Baseline emission factor
Source of data used:	Registered PDD
Value(s) :	0.8498
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculation
Additional comment:	-

D.2. Data and parameters monitored

Data / Parameter:	Electricity Exports (EG_{Ex})
Data unit:	MWh
Description:	Electricity supplied to the NWPG by the project
Measured /Calculated /Default:	Measured
Source of data:	Meter records and Sales receipts
Value(s) of monitored parameter:	134,344.185
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculation
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last	In accordance with the registered PDD, Bi-direction electricity meters were used as the monitoring equipments. Calibrations were carried out during the monitoring period by Electric Energy Measurement Center of Gansu Provincial Power Company annually which has the

<table>
<tr><td>calibration, validity)</td><td>qualification certificate. The measure standard for calibration is “Technical administrative code of electric energy metering DL/T 448-2000”. Calibration tests records are maintained for verification.
<table>
<tr><th>Meter</th><th>Type</th><th>Serial number</th><th>Accuracy</th><th>calibration frequency</th><th>date of last calibration</th><th>validity</th></tr>
<tr><td rowspan="2">Main meter(M_2)</td><td rowspan="2">SL7000</td><td rowspan="2">36055681</td><td rowspan="2">0.2s</td><td rowspan="2">Annually</td><td>2009-08-11</td><td>2010-08-10</td></tr>
<tr><td>2010-08-01</td><td>2011-7-31</td></tr>
<tr><td rowspan="2">Backup meter(M_1)</td><td rowspan="2">SL7000</td><td rowspan="2">36002888</td><td rowspan="2">0.2s</td><td rowspan="2">Annually</td><td>2009-08-11</td><td>2010-08-10</td></tr>
<tr><td>2010-08-01</td><td>2011-07-31</td></tr>
</table></td></tr>
<tr><td>Measuring/ Reading/ Recording frequency:</td><td>Measured continuously, read and recorded monthly</td></tr>
<tr><td>Calculation method (if applicable):</td><td>-</td></tr>
<tr><td>QA/QC procedures applied:</td><td>– Bi-direction meters were installed in the station and Yulei 110KV Substation. These instruments are properly maintained with regular testing and calibration during 2nd periodic monitoring period. Calibration tests records have been maintained for verification.
– The operational staff of the station were trained before post and can start to operate after achieved certificate so as to ensure the data quality of the electricity supplied to the grid.
– Project owner Set up a special CDM project team and developed a CDM manual on the monitoring and management of the project activity.
– Data record and relevant documents will be kept for at least two years after the end of the crediting period of the last issuance of CER_S.
– Measured data is double checked with receipt of sales</td></tr>
</table>

Data / Parameter:	Electricity Imports (EG_{Im})
Data unit:	MWh
Description:	Electricity imported by the project from the NWPG
Measured /Calculated /Default:	Measured
Source of data:	Records from Grid company, Operation Log
Value(s) of monitored parameter:	1
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculation
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Same as the part of EG_{Ex}
Measuring/ Reading/	Measured continuously, read and recorded monthly

Recording frequency:	
Calculation method (if applicable):	-
QA/QC procedures applied:	Same as the part of EG_{Ex}

Data / Parameter:	Net Electricity Exports (EG_y)
Data unit:	MWh
Description:	Net electricity supplied to the NWPG by the project
Measured /Calculated /Default:	Calculated
Source of data:	Monthly records and sales invoices
Value(s) of monitored parameter:	134,343.185
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculation
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	-
Measuring/ Reading/ Recording frequency:	Recorded monthly
Calculation method (if applicable):	Subtract electricity imports (EG_{Im}) from electricity exports (EG_{Ex}), viz. $EG_y = EG_{Ex} - EG_{Im}$
QA/QC procedures applied:	Directed and inspected by CDM project team leader, calculated and finished by monitoring charge and monitoring person, keep all original recorders for verification.

SECTION E. Emission reductions calculation

E.1. Baseline emissions calculation

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The baseline emissions are calculated in accordance with both the methodology ACM0002 (version 06) and the registered PDD according to the following formula:

$$BE_y = EG_y \times EF_y$$

Where: BE_y is the baseline emissions in year y;

EG_y is the electricity supplied to NWPG by the project activity in year y;

EF_y is the Baseline Emission Factor.

According to the registered PDD

EF_y = =0.8498 tCO_2e/MWh

The emission factor was determined ex-ante in the registered PDD and is fixed for the whole crediting period.

Baseline emissions during this monitoring period are shown in the Table below:

Calculation for Actual ER from 27/02/2010 to 26/02/2011

Monitoring period (Month)	Electricity supplied to the grid by the project (MW.h) (EG_{Ex})	Imported electricity from the grid (MW.h) (EG_{Ex})	Net electricity supplied to the grid (MW.h) (EG_y)	ER factor (tCO_2/MWh) (EF_y)	BE_y tCO_2
	A	B	C=A-B	D	E=C*D
2010.2.27-2010.3.29	5,030.520	0.000	5030.520	0.8498	4274.936
2010.3.30-2010.4.28	6,244.806	0.000	6244.806	0.8498	5306.836
2010.4.29-2010.5.29	10,847.100	0.500	10846.600	0.8498	9217.441
2010.5.30-2010.6.28	15,114.792	0.100	15114.692	0.8498	12844.465
2010.6.29-2010.7.29	17,045.952	0.400	17045.552	0.8498	14485.310
2010.7.30-2010.8.29	15,246.617	0.000	15246.617	0.8498	12956.575
2010.8.30-2010.9.28	17,374.896	0.000	17374.896	0.8498	14765.187
2010.9.29-2010.10.29	16,058.724	0.000	16058.724	0.8498	13646.704
2010.10.30-2010.11.28	11,006.314	0.000	11006.314	0.8498	9353.166
2010.11.29-2010.12.29	8,501.064	0.000	8501.064	0.8498	7224.204
2010.12.30-2011.1.29	6,739.260	0.000	6739.260	0.8498	5727.023
2011.1.30-2011.2.26	5,134.140	0.000	5134.140	0.8498	4362.992
Total	**134,344.185**	**1.000**	**134,343.185**		**114,164**

E.2. Project emissions calculation

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The JHP is a run-of-river hydropower project, the GHG emissions by sources from the project equal to zero, then PE_y =0.

E.3. Leakage calculation

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JHP is a gird-connected renewable project, according to ACM0002 (version 06), the leakage (L_y) of the project is not considered. Hence, the leakage (L_y) of the hydropower project is zero.

E.4. Emission reductions calculation / table

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In accordance with the methodology ACM0002 (version 06) and the registered PDD, The emission reduction ER_y by the project activity during a given year is the difference between baseline emissions (BE_y), project emissions (PE_y) and the leakage (L_y). The formula to estimate emission reductions is:

$$ER_y = BE_y - PE_y - L_y$$

Where: ER_y is the emission reductions by the project activity;

BE_y is baseline emissions;

PE_y is emissions from the project activity;

L_y is leakage from the project activity.

Since the project emissions (PE_y) as well as the leakage (L_y) are zero, the emission reductions are equal to baseline emissions.

$$ER_y = BE_y - 0 - 0 = EG_y \times EF_y$$

Emission reduction during this monitoring period is shown in the Table below:

Monitoring period (Month)	Net generation(MWh)	ER factor (tCO_2/MWh)	BE_y tCO_2	PE_y tCO_2	L_y tCO_2	ER_y tCO_2
	C	D	E=C*D	F	G	H=E-F-G
2010.2.27-2010.3.29	5030.520	0.8498	4274.936	0	0	4274.936
2010.3.30-2010.4.28	6244.806	0.8498	5306.836	0	0	5306.836
2010.4.29-2010.5.29	10846.600	0.8498	9217.441	0	0	9217.441
2010.5.30-2010.6.28	15114.692	0.8498	12844.465	0	0	12844.465
2010.6.29-2010.7.29	17045.552	0.8498	14485.310	0	0	14485.310
2010.7.30-2010.8.29	15246.617	0.8498	12956.575	0	0	12956.575
2010.8.30-2010.9.28	17374.896	0.8498	14765.187	0	0	14765.187
2010.9.29-2010.10.29	16058.724	0.8498	13646.704	0	0	13646.704
2010.10.30-2010.11.28	11006.314	0.8498	9353.166	0	0	9353.166
2010.11.29-2010.12.29	8501.064	0.8498	7224.204	0	0	7224.204
2010.12.30-2011.1.29	6739.260	0.8498	5727.023	0	0	5727.023
2011.1.30-2011.2.26	5134.140	0.8498	4362.992	0	0	4362.992
Total	**134343.185**		**114,164**	**0**	**0**	**114,164**

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)	108,689	114,164

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

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The forecasted annual emission reduction in the registered PDD is 108,689 tCO_2e. The actual emission reduction in this monitoring period (27/02/2010-26/02/2011, a whole year) was 114,164 tCO_2e, which is slightly higher than the estimated emission reduction, because the feasibility study in the PDD is based on a long term average for hydrological conditions. It is highly unlikely that the hydrological conditions in a single monitoring period are identical to the long term average.