

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

**CONTENTS**

- A. General description of the project activity
  - A.1. Brief description of the project activity
  - A.2. Project participants
  - A.3. Location of the project activity
  - A.4. Technical description of the project
  - A.5. Title, reference and version of the baseline and monitoring methodology applied to the project activity
  - A.6. Registration date of the project activity
  - A.7. Crediting period of the project activity and related information
  - A.8. Name of responsible person(s)/entity(ies)
- B. Implementation of the project activity
  - B.1. Implementation status of the project activity
  - B.2. Revision of the monitoring plan
  - B.3. Request for deviation applied to this monitoring period
  - B.4. Notification or request of approval of changes
- C. Description of the monitoring system
- D. Data and parameters monitored
  - D.1. Data and parameters used to calculate baseline emissions
  - D.2. Data and parameters used to calculate project emissions
  - D.3. Data and parameters used to calculate leakage emissions
  - D.4. Other relevant data and parameters
- E. Emission reductions calculation
  - E.1. Baseline emissions calculation
  - E.2. Project emissions calculation
  - E.3. Leakage calculation
  - E.4. Emission reductions calculation
  - E.5. Comparison of actual emission reductions with estimates in the registered CDM-PDD
  - E.6. Remarks on difference from estimated value

**MONITORING REPORT**

Version 01, 13/12/2011

**Bailongjiang Dalijie Hydropower Station**

Reference number: 2848

The 3rd Monitoring Period: 30/01/2011 -28/11/2011

**SECTION A. General description of the project activity****A.1. Brief description of the project activity: >>**

&gt;&gt;

The Bailongjiang Dalijie Hydropower Station (hereafter, the project) developed by GEPIC Darong Electric Power Company Ltd. (hereafter, the project owner) is a run-of-river hydropower project in Gansu Province, the People's Republic of China. Total installed capacity of the project is 40.2MW, consisting of three 13.4MW turbines.

The purpose of the project is to utilize the hydrological resources of the Bailong River through construction of a run-of-river hydro project to generate zero emissions electricity for the Gansu Power Grid, which is a part of the Northwest China Power Grid (hereafter, the NWCPG). The electricity currently generated by the NWCPG is relatively carbon intensive. The project is therefore expected to reduce emissions of greenhouse gases by reducing the need of thermally generated power and reducing needed capacity expansion of fossil fuel-based generation of the NWCPG.

The project installs 3 units of 13.4MW turbines providing a total installed capacity of 40.2MW, with average annual operating hours of 4,075h, and the average annual generation of 163,800MWh, the power supplied is estimated to be 163,472MWh. The implementation of the project is listed in Table A.1.

Table A.1 The implementation of the project

Key events	Date
Starting date of the project, on which date the project owner signed the construction contract	18 /11/ 2006
Construction started	12/12/2006
The generator #1 started operation	04/09/2009
The generator #2 started operation	22/09/2009
The generator #3 started operation	17/10/2009
Registration date(Start of crediting period)	06/12/2009
1 <sup>st</sup> verification period	06/12/2009-29/05/2010
2 <sup>nd</sup> verification period	30/05/2010-29/01/2011
3 <sup>rd</sup> verification period	30/01/2011-28/11/2011

From 30/01/2011 to 28/11/2011 (total 303 days), the project has a total actual net electricity exported to the grid of 110,521.752MWh, corresponds to the emission reductions of 93,921tCO<sub>2</sub>e.

**A.2. Project Participants**

&gt;&gt;

Name of Party involved (host) indicates a host Party)	Private and/or public entity(-ies) project participants
The People's Republic of China (host)	GEPIC Darong Electric Power Company Ltd
The Netherlands	Vattenfall Energy Trading Netherlands N.V.

### A.3. Location of the project activity:

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Lijie Village, Lijie Township, Zhouqu County, Tibetan Autonomous Prefecture of Gannan, Gansu Province, the People's Republic of China. The geographical coordinates of the dam are 104°02'11" E and 33°53'18" N, and the geographical coordinates of the powerhouse are 104°03'23" E and 33°53'46" N.

### A.4. Technical description of the project

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The project is a run-of-river hydropower plant, which is composed of a concrete gravity dam, release sluice, channels, powerhouse, and switch station. The electricity for the project is generated by three units of HLA551-LJ-272 turbines and three units of SF-J13.4-36/5100 generators. The annual power generation is expected to be approximately 163,800MWh over an expected operational lifetime of 25 years. The power is delivered to the Gansu Power Grid (which is a part of the NWCPG) via 110kV line to a designated transformer station. The technical process is indicated in the Figure A.4.

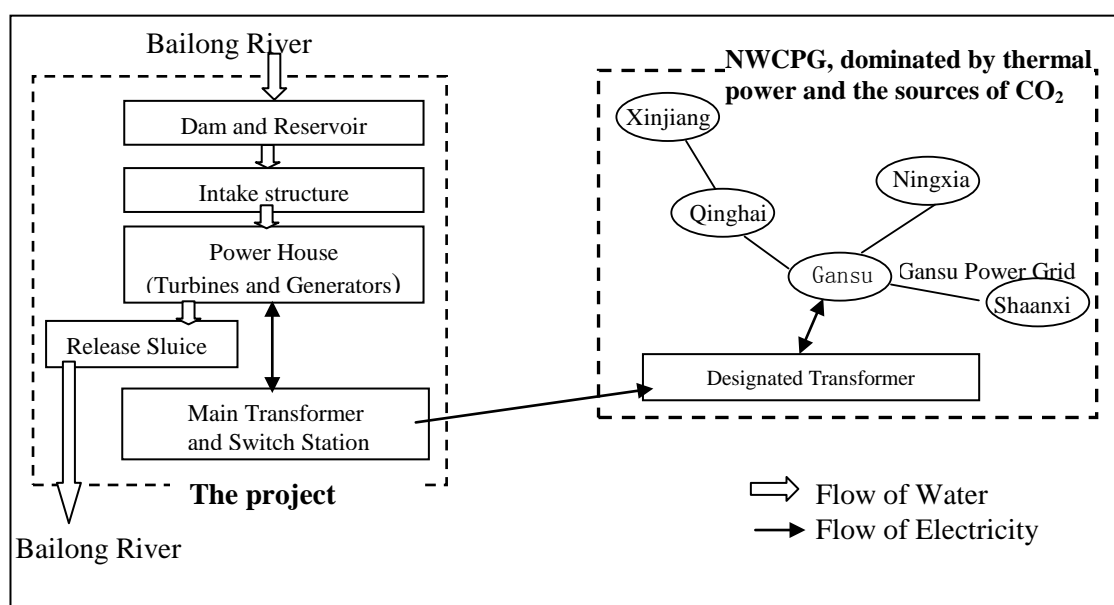


Figure A.4 The diagram of technology of the project

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

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1. The baseline and monitoring methodology ACM0002 is used: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" version 07;
2. "Tool to calculate the emission factor for an electricity system" version 01.1.
3. "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion", version 2;
4. "Tool for demonstration and assessment of additionality", Version 05.2.

### A.6. Registration date of the project activity:

>>06/12/2009

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

>>

The crediting period is fixed crediting period (10 years) from 6/12/2009 to 5/12/2019.

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

>> Ms. Jennifer Wang of DHV BEEC Co., Ltd. is responsible for completing the monitoring report.  
Address: West third floor, Building 8, Wanguocheng, No.1 Xiangheyuan Road, Dongcheng District.  
Beijing. 100028, PRC  
Tel: +86 10 84408442 ext. 167  
Fax: +86 10 84407989  
E-mail: jennifer.wang@dhv.com  
www.dhv.cn  
(Not Project Participant)

## **SECTION B. Implementation of the project activity**

### **B.1. Implementation status of the project activity**

>>

The project activity has been in operation since 4 Sep. 2009. Other information is listed in details in Table A.1 in A.1.

The project implemented several conventional overhauls during this monitoring period, and no big repair happened during this monitoring period.

No events or situations occurred during the monitoring period, which may impact the applicability of the methodology.

### **B.2. Revision of the monitoring plan**

>> The monitoring plan has not been revised.

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

>>No deviation applied to this monitoring period.

### **B.4. Notification or request of approval of changes**

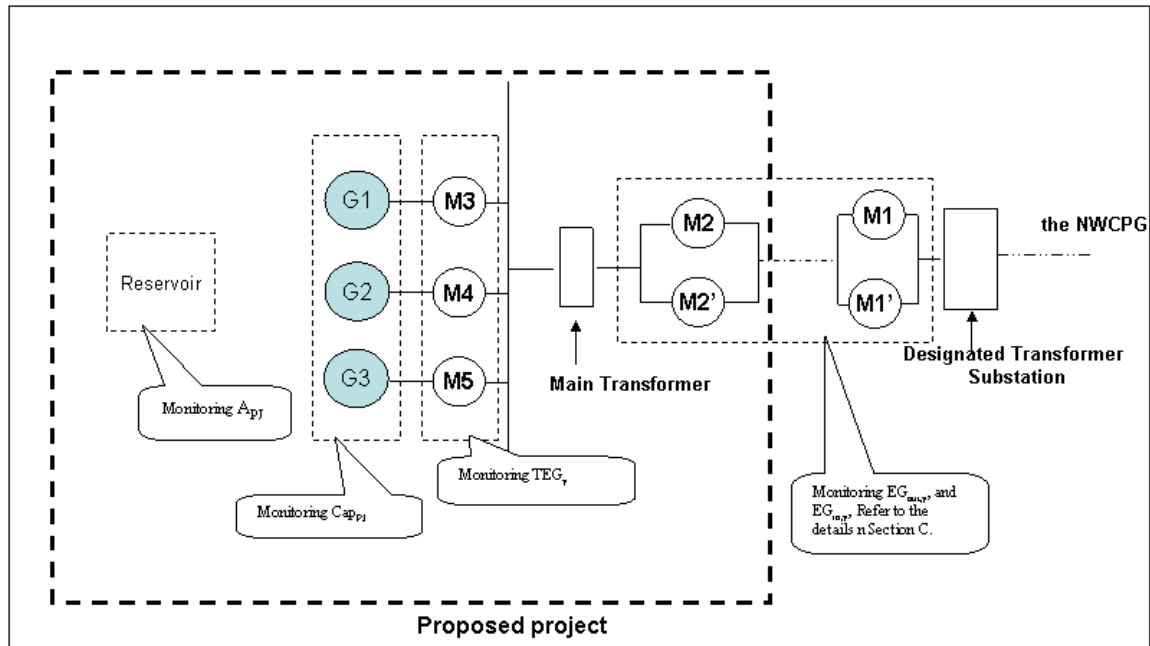
>> No notification or request of approval of changes from the project activity as described in the registered CDM-PDD.

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

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### **Data collection procedures:**

As the Figure C.1 indicated, monitoring data are monitored at these points.



**Figure C.1 Diagram of monitoring points**

As per the registered PDD, net electric power exported to the grid ( $EG_y$ ) is calculated as the difference of the electricity supplied by the project to NWCPG ( $EG_{out,y}$ ) and the electricity imported from the NWCPG to the project ( $EG_{in,y}$ ).

$EG_{out,y}$ , the electricity supplied by the project to NWCPG, is measured by two metering systems, a main metering system (M1 and M1') and a check metering system (M2 and M2') to backup. The main metering system which measured the electricity supplied by the project to NWCPG is installed at Designated Transformer Substation. The check metering system is installed at the project site as a reference and backup to the main metering system. The meters are monitored continuously. The grid company reads and records the meters of the main metering system at the 24:00 of the third last day of each month. The plant operation staff reads and records the meters of the check metering system in monthly reading records at the 24:00 of the third last day of each month. The readings of the plant operation staff are submitted to the grid company. The grid company compares the readings with theirs and provides sales receipts to the project owner. The project owner confirms the sales receipts and issues invoices to the grid company.

$EG_{in,y}$ , the electricity imported from the NWCPG, is measured by the same systems as the systems to monitor  $EG_{out,y}$ , as the meters are bidirectional. The meters are monitored continuously. The grid company reads and records the meters of the main metering system at the 24:00 of the third last day of each month. The plant operation staff reads and records the meters of the check metering system in monthly reading records at the 24:00 of the third last day of each month. The grid company compares the readings with theirs and provides sales receipts and the invoices for the electricity imported from the NWCPG to the project owner.

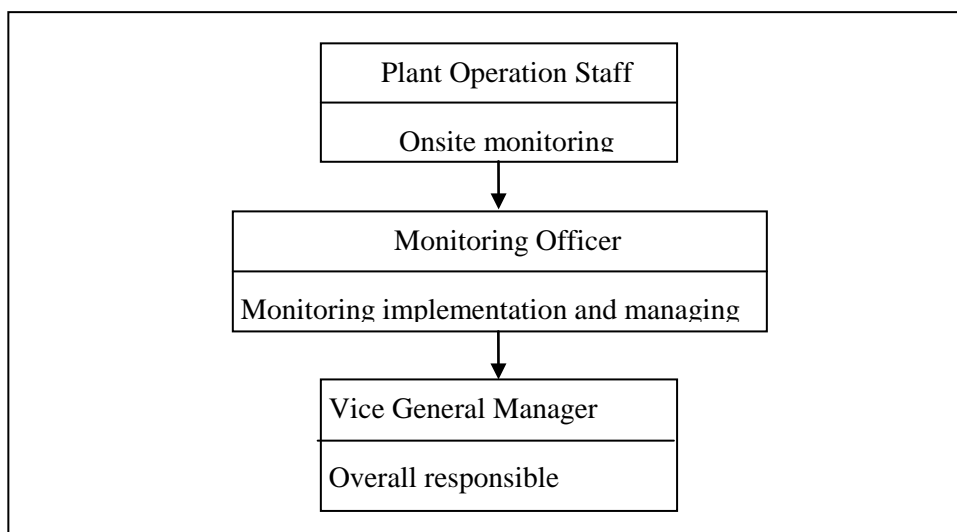
$TEG_y$ , total electricity produced by the project activity, is measured by the sum of the three meters (M3, M4, M5) at the outlet of generators. The data of each meter will be automatically measured continuously and be read and recorded daily by the plant operation staff on the monthly reading records. The sum of the three meters is also recorded on the monthly reading records. The monthly data will be recorded electronically.

$Cap_{PJ}$ , installed capacity of the hydro power plant after the implementation of the project activity, is checked and recorded from nameplate of the equipment on the site yearly.

$A_{PJ}$ , the surface area of full reservoir level, is measured by the Northwest Hydro Consulting Engineers, CHECC yearly.

## Monitoring Organization and Responsibility

The project owner designated a monitoring team responsible for the monitoring plan. The structure of the monitoring team is outlined in Figure C.2.



*Figure C.2 Structure of the monitoring team*

The responsibilities of the team are briefly described as following:

**Vice General Manager:** hold the overall responsibility for the monitoring process and approval of the monitoring report.

**Monitoring Officer:** charge of all relevant matters with the monitoring activity, including but not limited to supervision and verification of metering and recording; collection of additional data, sales / billing receipts; Calibration; Calculation of emission reductions; Preparation of monitoring report.

**Plant Operation Staff:** is responsible for the measurement of the monitored data, and assisted the monitoring officer on the plant site.

## Training

The project owner with the help from DHV BEEC Co., Ltd. has compiled the CDM Monitoring Manual on monitoring work. The Monitoring Officer has organized training for staffs in relation with monitoring team on CDM knowledge; monitoring methodology and CDM monitoring Manual; data recording and archiving; relevant laws and regulations.

## 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 two meters (i.e. M1 and M1') recorded by the grid company are in malfunction only:

If only M1 exceeds the allowable tolerance or otherwise the meter malfunctioned, M1' will be used to monitor the data. If both M1 and M1' are in malfunction, the monitoring data logged by the project owner, will be used to calculate the data for the sales receipts/billing invoices.

- In case meters recorded by project owner are in malfunction only:

If only M2 exceeds the allowable tolerance or otherwise the meter malfunctioned, M2' will be used to play the check role. If both M2 and M2' are in malfunction, the monitoring data by the M3, M4 and M5 will be used to play the check role.

- In case all meters are in malfunction:

The project owner and the grid company will jointly calculate a conservative estimate of all the data. If the project owner and the grid company fail to reach an agreement concerning the correct reading, then the matter will be submitted for arbitration according to agreed procedures.

## 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

<b>Data / Parameter:</b>	<b>EF<sub>grid,CM,y</sub></b>
<b>Data unit:</b>	<b>tCO<sub>2</sub>/MWh</b>
<b>Description:</b>	Combined margin CO <sub>2</sub> emission factor for grid connected power generation in year y
<b>Source of data used:</b>	Official data from Chinese DNA: <a href="http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1364.pdf">http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1364.pdf</a>
<b>Value(s) :</b>	0.8498. See Annex 3 of its PDD for details
<b>Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)</b>	Published official statistics by Chinese DNA.
<b>Additional comment:</b>	No.

### D.2. Data and parameters monitored

Data / Parameter:	EG <sub>out,y</sub>						
Data unit:	MWh						
Description:	Annual on-grid electricity supplied to NWCPG by the project.						
Measured /Calculated /Default:	Measured. Measured continuously by M1 and M1’, and checked by M2 and M2’.						
Source of data:	Sales receipts of the grid company and monthly reading records of the project owner						
Value(s) of monitored parameter:	110,537.592MWh from 30/01/2011 to 28/11/2011, see Table E.1 for details.						
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculations						
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	The meters are bi-direction. M1, main meter to monitor. M1’, auxiliary meter for the M1, which could check the data and will replace the M1 in case of the failure of M1. M2, main check meter M2’, auxiliary check meter for the M2, which could check the data and will replace the M2 in case of the failure of M2. Locations of these meters are indicated in Figure C-1.						
	Meter No.	Type	Accuracy	Serial Number	Calibration Frequency	Date of calibration	Calibration Validity
	M1	SL7000	0.2S	51000047	1 year	27//12/2010 27/03/2011	Yes
	M1’	SL7000	0.2S	51000048	1 year	27//12/2010 27/03/2011	Yes
	M2	SL7000	0.2S	51000045	3 year	18/03/2010 27/03/2011	Yes
	M2’	SL7000	0.2S	51000046	3 year	18/03/2010 27/03/2011	Yes
Measuring/ Reading/ Recording frequency:	Measured continuously, read and recorded monthly.						
Calculation method (if	N.A.						

applicable):	
QA/QC procedures applied:	<ul style="list-style-type: none"> <li>– M1 and M1' are calibrated every year.</li> <li>– M2 and M2' are calibrated once three years.</li> <li>– Power is double checked with sales invoices.</li> <li>– Data record and relevant documents will be archived for a period of 2 years after the crediting period.</li> <li>– Special CDM project team has been set up.</li> <li>– A detailed rule on monitoring management has been made.</li> </ul>

<b>Data / Parameter:</b>	<b>EG<sub>in,y</sub></b>
Data unit:	<b>MWh</b>
Description:	Annual on-grid electricity imported from NWCPG by the project for the plant operation.
Measured /Calculated /Default:	Measured. Measured continuously by M1 and M1', and checked by M2 and M2'.
Source of data:	Sales receipts and monthly reading records of the project owner
Value(s) of monitored parameter:	15.840MWh from 30/01/2011 to 28/11/2011, see Table E.1 for details.
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculations
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Same as the part of <b>EG<sub>out,y</sub></b> .
Measuring/ Reading/ Recording frequency:	Measured continuously, read and recorded monthly.
Calculation method (if applicable):	N.A.
QA/QC procedures applied:	M1 and M1' are calibrated every year. M2 and M2' are calibrated once three years. Power is double checked with sales invoices. Data record and relevant documents will be archived for a period of 2 years after the crediting period. Special CDM project team has been set up. A detailed rule on monitoring management has been made.

<b>Data / Parameter:</b>	<b>EG<sub>y</sub></b>
Data unit:	<b>MWh</b>
Description:	Net electricity exported to the NWCPG by the project
Measured /Calculated /Default:	Measured and calculated
Source of data:	Measured and calculated by $EG_y = EG_{out,y} - EG_{in,y}$
Value(s) of monitored parameter:	110,521.752MWh from 30/01/2011 to 28/11/2011, Table E.1 for details.
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emission calculations
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last	Same as the part of <b>EG<sub>out,y</sub></b>



calibration, validity)	
Measuring/ Reading/ Recording frequency:	Recorded according to monitoring period.
Calculation method (if applicable):	$EG_y = EG_{out,y} - EG_{in,y}$
QA/QC procedures applied:	Data record and relevant documents will be archived for a period of 2 years after the crediting period. Special CDM project team has been set up. A detailed rule on monitoring management has been made.

Data / Parameter:	TEG <sub>y</sub>																																		
Data unit:	MWh																																		
Description:	Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y.																																		
Measured /Calculated /Default:	Calculated. Calculated as the sum of M3, M4 and M5.																																		
Source of data:	Monthly reading records																																		
Value(s) of monitored parameter:	112,221.600MWh from 30/01/2011 to 28/11/2011, table in the Section E.2 for details.																																		
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Project emissions calculation																																		
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	M3, M4, M5 are used to monitor the electricity produced by the each generator. Locations of these meters are indicated in Figure C.1. <table><tr><td>Meter No.</td><td>Type</td><td>Accuracy</td><td>Serial number</td><td>Frequency of calibration</td><td>Date of calibration</td><td>Calibration Validity</td></tr><tr><td>M3</td><td>DTSD341</td><td>0.5S</td><td>20080352030008</td><td>3 year</td><td>30/06/2010</td><td>Yes</td></tr><tr><td>M4</td><td>DTSD341</td><td>0.5S</td><td>20080352030007</td><td>3 year</td><td>30/06/2010</td><td>Yes</td></tr><tr><td>M5</td><td>DTSD341</td><td>0.5S</td><td>20080352030004</td><td>3 year</td><td>30/06/2010</td><td>Yes</td></tr></table>							Meter No.	Type	Accuracy	Serial number	Frequency of calibration	Date of calibration	Calibration Validity	M3	DTSD341	0.5S	20080352030008	3 year	30/06/2010	Yes	M4	DTSD341	0.5S	20080352030007	3 year	30/06/2010	Yes	M5	DTSD341	0.5S	20080352030004	3 year	30/06/2010	Yes
Meter No.	Type	Accuracy	Serial number	Frequency of calibration	Date of calibration	Calibration Validity																													
M3	DTSD341	0.5S	20080352030008	3 year	30/06/2010	Yes																													
M4	DTSD341	0.5S	20080352030007	3 year	30/06/2010	Yes																													
M5	DTSD341	0.5S	20080352030004	3 year	30/06/2010	Yes																													
Measuring/ Reading/ Recording frequency:	Measured continuously, read and recorded monthly.																																		
Calculation method (if applicable):	Calculated as the sum of M3, M4 and M5.																																		
QA/QC procedures applied:	M3, M4 and M5 are calibrated once three years. Data record and relevant documents will be archived for a period of 2 years after the crediting period. Special CDM project team has been set up. A detailed rule on monitoring management has been made.																																		

<b>Data / Parameter:</b>	<b>Cap<sub>PJ</sub></b>
Data unit:	<b>MW</b>
Description:	Installed capacity of the hydro power plant after the implementation of the project activity.
Measured /Calculated /Default:	Default.
Source of data:	Check the nameplate of the equipment on the site.
Value(s) of monitored parameter:	40.2
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Project emission calculations

Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	No.
Measuring/ Reading/ Recording frequency:	Check the nameplate of the equipment on the site, yearly.
Calculation method (if applicable):	N.A.
QA/QC procedures applied:	Data record and relevant documents will be archived for a period of 2 years after the crediting period. Special CDM project team has been set up. A detailed rule on monitoring management has been made.

<b>Data / Parameter:</b>	<b>A<sub>PI</sub></b>
Data unit:	<b>m<sup>2</sup></b>
Description:	Area of the reservoir measured at the surface of the water, after the implementation of the project activity, when the reservoir is full.
Measured /Calculated /Default:	Measured.
Source of data:	Survey Report on Surface Area of the Reservoir, by Northwest Hydro Consulting Engineers, CHECC.
Value(s) of monitored parameter:	471,600
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Project emission calculations.
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Equipments of Northwest Hydro Consulting Engineers, CHECC.
Measuring/ Reading/ Recording frequency:	Measured and recorded yearly.
Calculation method (if applicable):	N. A.
QA/QC procedures applied:	Data record and relevant documents will be archived for a period of 2 years after the crediting period.

## SECTION E. Emission reductions calculation

### E.1. Baseline emissions calculation

>>

Baseline emissions include only CO<sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, calculated as follows:

$$BE_y = (EG_y - EG_{\text{baseline}}) \bullet EF_{\text{grid,CM,y}} \quad (\text{E.1})$$

Where:

BE<sub>y</sub> = Baseline emissions in year y (tCO<sub>2</sub>/yr).

EG<sub>y</sub> = Net electricity exported to the grid by the project activity (MWh), as indicated in the Table E.1.

EG<sub>baseline</sub> = Baseline electricity supplied to the grid in the case of modified or retrofit facilities (MWh).

For new power plants this value is taken as zero, for this project is zero, i.e. EG<sub>baseline</sub> = 0.

$EF_{\text{grid,CM,y}}$  = Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the “Tool to calculate the emission factor for an electricity system”. The value has been calculated ex ante as 0.8498tCO<sub>2</sub>/MWh and there is no need for monitor and recalculation.

Baseline emissions during this monitoring period is shown in the Table E.1

Table E.1 Baseline emission reduction calculation

Period	Electricity supplied by the project activity to the grid (EG <sub>out,y</sub> ), MWh		Electricity imported from the grid (EG <sub>in,y</sub> ), MWh		Net electricity exported to the grid(EG <sub>y</sub> ), MWh	EF <sub>grid,CM,y</sub> , tCO <sub>2</sub> e/MWh	BE <sub>y</sub> , tCO <sub>2</sub> e
	Only for reference	A	Only for reference	B	C=A-B	D	E=C*D
	Data of M2 and M2' <sup>*1</sup>	Data of M1 and M1' <sup>*2</sup>	Data of M2 and M2' <sup>*1</sup>	Data of M1 and M1' <sup>*2</sup>			
30/01/2011-26/02/2011	3,410.220	<b>3,407.976</b>	0.000	<b>0.000</b>	3,407.976	0.8498	<b>2,896</b>
27/02/2011-29/03/2011	3,095.400	<b>3,093.222</b>	0.000	<b>0.000</b>	3,093.222	0.8498	<b>2,629</b>
30/03/2011-28/04/2011	5,268.780	<b>5,266.734</b>	0.000	<b>0.000</b>	5,266.734	0.8498	<b>4,476</b>
29/04/2011-29/05/2011	8,214.360	<b>8,211.852</b>	0.000	<b>0.000</b>	8,211.852	0.8498	<b>6,978</b>
30/05/2011-28/06/2011	12,719.520	<b>12,717.672</b>	4.620	<b>4.620</b>	12,713.052	0.8498	<b>10,804</b>
29/06/2011-29/07/2011	19,402.680	<b>19,400.436</b>	3.300	<b>3.300</b>	19,397.136	0.8498	<b>16,484</b>
30/07/2011-29/08/2011	13,590.720	<b>13,586.694</b>	0.924	<b>0.924</b>	13,585.770	0.8498	<b>11,545</b>
30/08/2011-28/09/2011	20,337.900	<b>20,336.184</b>	6.336	<b>6.996</b>	20,329.188	0.8498	<b>17,276</b>
29/09/2011-29/10/2011	14,741.100	<b>14,738.526</b>	0.000	<b>0.000</b>	14,738.526	0.8498	<b>12,525</b>
30/10/2011-28/11/2011	9,778.560	<b>9,778.296</b>	0.000	<b>0.000</b>	9,778.296	0.8498	<b>8,310</b>
Total(30/01/2011-28/11/2011)	110,559.240	<b>110,537.592</b>	15.180	<b>15.840</b>	110,521.752	-	<b>93,921</b>

## E.2. Project emissions calculation

>>

According to the ACM0002, if the power density (PD) of the power plant is greater than 10 W/m<sup>2</sup>:  
 $PE_y = 0$

The power density of the project activity is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}} \quad (E.2)$$

Where:

PD = Power density of the project activity (W/m<sup>2</sup>).

Cap<sub>PJ</sub> = Installed capacity of the hydro power plant after the implementation of the project activity (W).

Cap<sub>BL</sub> = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero.

A<sub>PJ</sub> = Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m<sup>2</sup>).

A<sub>BL</sub> = Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m<sup>2</sup>). For new reservoirs, this value is zero.

For this project:  $PD = 40,200,000W \div 471,600m^2 = 85.24W/m^2$ , is greater than 10 W/m<sup>2</sup>. So the Project emission is zero. i.e.  $PE_y = 0$ .

The monitoring data of the TEG<sub>y</sub> is 112,221.600MWh from 30/01/2011 to 28/11/2011, as indicated in the following table.

Period	Electricity produced by G1, MWh	Electricity produced by G2, MWh	Electricity produced by G3, MWh	Total electricity produced by the project activity(TEG <sub>y</sub> ), MWh
30/01/2011-26/02/2011	3,126.000	362.400	0.000	3,488.400
27/02/2011-29/03/2011	2,250.000	68.400	885.600	3,204.000
30/03/2011-28/04/2011	3,601.200	0.000	1,803.600	5,404.800
29/04/2011-29/05/2011	4,200.000	511.200	3,628.800	8,340.000
30/05/2011-28/06/2011	5,634.000	704.400	6,852.000	13,190.400
29/06/2011-29/07/2011	7,711.200	6,517.200	5,479.200	19,707.600
30/07/2011-29/08/2011	1,792.800	8,402.400	3,460.800	13,656.000
30/08/2011-28/09/2011	6,303.600	8,901.600	5,287.200	20,492.400
29/09/2011-29/10/2011	489.600	7,742.400	6,666.000	14,898.000
30/10/2011-28/11/2011	400.800	5,359.200	4,080.000	9,840.000
Total(30/01/2011-28/11/2011)	35,509.200	38,569.200	38,143.200	<b>112,221.600</b>

## E.3. Leakage calculation

>>

According to the ACM0002 methodology, the leakage in the project is neglected, i.e.  $LE_y = 0$ .

## E.4. Emission reductions calculation / table

>>

The emission reductions ER, during a given year y is the difference of baseline emission BE<sub>y</sub>, deduce the project emission PE<sub>y</sub>, and the leakage LE<sub>y</sub>, calculated as

$$ER_y = BE_y - PE_y - LE_y \quad (E.4-1)$$

Where:

ER<sub>y</sub> = Emission reductions in year y (t CO<sub>2</sub>e/yr).

BE<sub>y</sub> = Baseline emissions in year y (t CO<sub>2</sub>e/yr).

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

PE<sub>y</sub> = Project emissions in year y (t CO<sub>2</sub>e/yr).  
 LE<sub>y</sub> = Leakage emissions in year y (t CO<sub>2</sub>e/yr).

Emission reduction during this monitoring period is shown in the following table.

Period	EG <sub>y</sub> MWh	EF <sub>grid,CM,y</sub> tCO <sub>2</sub> e/MWh	BE <sub>y</sub> tCO <sub>2</sub> e	PE <sub>y</sub> tCO <sub>2</sub> e	Ly tCO <sub>2</sub> e	ER <sub>y</sub> tCO <sub>2</sub> e
30/01/2011-26/02/2011	3,407.976	0.8498	2,896	0	0	2,896
27/02/2011-29/03/2011	3,093.222	0.8498	2,629	0	0	2,629
30/03/2011-28/04/2011	5,266.734	0.8498	4,476	0	0	4,476
29/04/2011-29/05/2011	8,211.852	0.8498	6,978	0	0	6,978
30/05/2011-28/06/2011	12,713.052	0.8498	10,804	0	0	10,804
29/06/2011-29/07/2011	19,397.136	0.8498	16,484	0	0	16,484
30/07/2011-29/08/2011	13,585.770	0.8498	11,545	0	0	11,545
30/08/2011-28/09/2011	20,329.188	0.8498	17,276	0	0	17,276
29/09/2011-29/10/2011	14,738.526	0.8498	12,525	0	0	12,525
30/10/2011-28/11/2011	9,778.296	0.8498	8,310	0	0	8,310
Total(30/01/2011-28/11/2011)	110,521.752	-	93,921	0	0	<b>93,921</b>

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

>>

This section shall include a comparison of actual values of the emission reductions achieved during the monitoring period with the estimations in the registered CDM-PDD.

Item	Values applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period
Emission reductions (tCO <sub>2</sub> e)	115,322 <sup>1</sup>	93,921

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

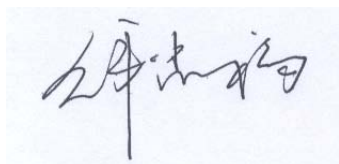
>>

The emission reductions during this monitoring period are lower than estimate in the registered PDD.

The monitoring report has been approved by Vice General Manager of GEPIC Darong Electric Power Co.Ltd.

Full name of Vice General Manager of GEPIC Darong Electric Power Co.Ltd.: Kaifu Xian

Signature:



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<sup>1</sup> The total is 303 days in the monitoring period and the emission reduction is 138,919tCO<sub>2</sub>e in the registered PDD annually, therefore, the estimated emission reduction of 115,322tCO<sub>2</sub>e in the monitoring period is calculated as: 138,919tCO<sub>2</sub>e/365days\*303days=115,322tCO<sub>2</sub>e.

### History of the document

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