

Monitoring report, version 01

Project Name: Pingwu Renjiaba 12.6 MW Small Hydropower Project, P.R.China

UNFCCC Reference Number: 1190

Monitoring Period: 17 September 2007 to 20 August 2008

Table of Contents:

General Information.....	2
Purpose of a Monitoring Report	2
Project Description.....	2
General Introduction of the Project.....	2
Technical of the Project	2
Monitoring Protocol.....	2
Monitored Parameters	3
Data Collection Process QA/QC.....	4
The location of the meters.....	4
Roles and responsibilities	4
Training.....	5
Calibrations	5
Quality control	6
Emission Reduction Calculations	6
Emission Factors of CCPG:	6
Summary of the emission reductions:.....	6

General Information

Purpose of a Monitoring Report

In order to achieve real, measurable and verifiable emission reduction, it is crucial that all data necessary for the calculation of emission reductions are properly measured, recorded and reported, in line with the approved methodology used and the monitoring plan contained in the registered PDD.

Project Description

General Introduction of the Project

Pingwu Renjiaba 12.6 MW Small Hydropower Project, P. R. China is a renewable electricity generation project activity located in Shuijing Town of Pingwu County, Sichuan Province. P. R. China. The total installed capacity of the project is 12.6 MW (6.3 MW*2). The Project is designed to deliver 77458MWh of electricity to the China Central Power Grid (CCPG) per year, replacing fossil fuel consumption and thus reducing GHG (CO₂) emissions.

A more detailed description is available in the PDD and related documentation.

Technical of the Project

The project installed 2 sets of Turbines and Generators with a unit capacity of 6.3 MW. Electricity generated from the proposed project is connected to Renjiaba Transformer Substation, and then transmitted to Sichuan Provincial Power Grid, finally delivered to the China Central Power Grid (CCPG).

Monitoring Protocol

In line with the approved methodology used and the monitoring plan contained in the registered PDD, the following parameters have to be monitored:

Data / Parameter:	EG_{ex}
Data unit:	MWh
Description:	Electricity supplied to the grid from the project
Source of data to be used:	Cumulative reading of electricity meters installed at the power plan
Description of measurement methods and procedures to be applied:	The readings of the electricity meter will be hourly measured and monthly recorded. Data will be archived for 2 years following the end of the crediting period by means of electronic and paper backup. The accuracy of electricity meter is 0.5s.
QA/QC procedures to be applied:	According to national standards, meters will be calibrated periodically. Data measured by meters will be cross checked by electricity sales receipt. The main data source meter is located at Renjiaba Transformer Substation that is owned and managed by the grid company. All calibration and maintenance standards and procedures will follow the industrial codes and regulations of the

	grid company. Calibration on both the revenue meter and the backup meter will be done by a qualified party every year. In case of a reading of the revenue meter is evidenced to be wrong (or a calibration is not ok), readings from the backup meter which is owned and managed by the project developer would be adopted.
Any comment:	

Data / Parameter:	EG_{im}
Data unit:	MWh
Description:	Electricity purchased from the Grid by the proposed project during year y
Source of data to be used:	Electricity meter reading at the connection point between the proposed project and the Grid
Description of measurement methods and procedures to be applied:	The readings of the electricity meter will be hourly measured and monthly recorded. Data will be archived for 2 years following the end of the crediting period by means of electronic and paper backup. The accuracy of electricity meter is 0.5s.
QA/QC procedures to be applied:	According to national standards, meters will be calibrated periodically. Data measured by meters will be cross checked by electricity sales receipt. The main data source meter is located at Renjiaba Transformer Substation that is owned and managed by the grid company. All calibration and maintenance standards and procedures will follow the industrial codes and regulations of the grid company. Calibration on both the revenue meter and the backup meter will be done by a qualified party every year. In case of a reading of the revenue meter is evidenced to be wrong (or a calibration is not ok), readings from the backup meter which is owned and managed by the project developer would be adopted.
Any comment:	

Monitored Parameters

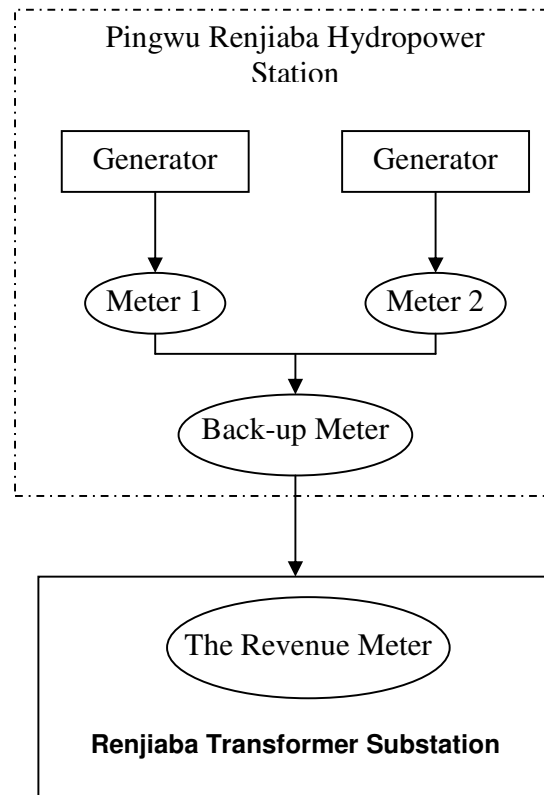
	Exported (MWh)	Imported (MWh)	Net (MWh)	Note
Sep. 17-Sep. 20, 2007	645.75	0	645.75	Starting date of crediting period is Sep. 17, 2007
Sep. 21- Oct. 20, 2007	5460.7	0.35	5460.35	
Oct. 21- Nov. 20, 2007	5531.75	1.05	5530.7	
Nov. 21-Dec. 20, 2007	3798.55	0	3798.55	
Dec. 21-Jan. 20, 2008	5343.8	0.35	5343.45	
Jan. 21-Feb. 20, 2008	3158.4	0	3158.4	
Feb. 21- Mar. 20, 2008	3360	0	3360	
Mar. 21- Apr. 20, 2008	5244.75	1.75	5243	
Apr. 21- May 20, 2008	4085.2	1.75	4083.45	Earthquake of Sichuan Province on
May 21- Jun. 20, 2008	3243.1	9.45	3233.65	
Jun. 21- Jul. 20, 2008	6251	0	6251	

Jul. 21-Aug. 20, 2008	7201.6	0.7	7200.9	May 12, 2007, part of the grid was destroyed.
Total	53324.6	15.4	53309.2	

Data Collection Process QA/QC

The location of the meters

The revenue meter, which is also the main data source for CER calculation, locates at Renjiaba Transformer Substation which is owned and managed by the grid company. The backup meter locates at the proposed project which is owned and managed by the project owner. The sketch of the meters location is as following:



Roles and responsibilities

Overall responsibility for monitoring and carrying out the monitoring following this monitoring plan lies with Pingwu Chuanjiang Hydropower Development Co. Ltd.

Mr. Lianggui Yue, Operation Department Manager of Pingwu Renjiaba 12.6 MW Small Hydropower Project, P.R.China, is responsible for the operation and maintenance, which includes the monitoring of the project.

Mr. Li Li, Project Manager of Operation Department Manager, is responsible for the daily monitoring and reporting.

Training

College of Environmental Science and Engineering, Hunan University has carried out the training works about CDM knowledge and the monitoring requirements for Pingwu Chuanjiang Hydropower Development Co. Ltd..

The staffs that are responsible for electricity meter reading and recording, and who are responsible for auditing these metered data have been trained according to the CDM monitoring and management manual for Pingwu Renjiaba 12.6 MW Small Hydropower Project, P.R.China.

Calibrations

The Power Purchase Agreement between Pingwu Chuanjiang Hydropower Development Co. Ltd. and Sichuan Province Pingwu Power (Group) Company Limited defines the metering arrangements and the required quality control procedures to ensure accuracy.

The metering equipment are calibrated and checked annually for accuracy. The metering equipment has sufficient accuracy so that any error resulting from such equipment shall not exceed 0.5% of full-scale rating. The net electricity output measured and recorded by the meters alone will suffice for the purpose of billing and emission reduction verification as long as the error in the meters is within the agreed limits.

Calibration is carried out by Pingwu County Quality and Measurement Institute with the records being supplied to Sichuan Province Pingwu Power (Group) Co. Ltd. and Pingwu Chuanjiang Hydropower Development Co. Ltd..

Both meters have been jointly inspected and sealed on behalf of the parties concerned and shall not be interfered with by either party except in the presence of the other party or its accredited representatives.

In case the following circumstances occur on the revenue meter:

- any abnormal circumstances identified
- meter failure
- Meter is repaired or replaced due to faults of the meter parts.

In this case, the project owner and the grid company will ensure informing the counterparty immediately to jointly appoint a qualified third party conduct appropriate action accordingly. In the mean time, readings from the backup meter that is owned and managed by the project developer will be adopted.

No meter errors have occurred to-date at Pingwu Renjiaba 12.6 MW Small Hydropower Project, P.R.China. Calibration took place as per schedule. Calibrations were carried out by staff from Pingwu County Quality and Measurement Institute. The calibration results showed that both meters operated in accordance with the industry standards and are qualified to measure the

electricity supplied to the grid and consumed by the proposed project.

Quality control

Monthly net generation data has been approved and signed off by staffs that are responsible for recording meter reading at Pingwu Transformer Substation. Internal auditing, management review, and corrective actions have been set up in the management system of the proposed project. And the electricity data have been cross checked with receipt from Sichuan Province Pingwu Power (Group) Co. Ltd.. All data will be kept at least until two years after the issuance of the last credits.

Emission Reduction Calculations

As the emissions factor is fixed for the first crediting period, and the combined ex-ante baseline emission factor has been chosen according to the registered PDD.

The electricity generated from the proposed project is delivered to the China Central Power Grid (CCPG) via Sichuan Provincial Power Grid, replacing fossil fuel consumption and thus reducing GHG (CO₂) emissions from CCPG. According to the registered PDD, the baseline emission factors of CCPG are as following:

Emission Factors of CCPG:

Operation Margin Emission Factor (EF _{OM,y} , tCO ₂ /MWh)	A	1.2526
Build Margin Emission Factor (EF _{BM,y} , tCO ₂ /MWh)	B	0.6346
Combined Emission Factor (EF _y , tCO ₂ /MWh)	$C = 0.5 * A + 0.5 * B$	0.9436

Summary of the emission reductions:

Date	Baseline Emissions	Project Emissions	Leakage	Emission Reductions
Sep. 17- Sep. 20, 2007	609	0	0	609
Sep. 21- Oct. 20, 2007	5152	0	0	5152
Oct. 21- Nov. 20, 2007	5219	0	0	5219
Nov. 21- Dec. 20, 2007	3584	0	0	3584
Dec. 21- Jan. 20, 2008	5042	0	0	5042
Jan. 21- Feb. 20, 2008	2980	0	0	2980
Feb. 21- Mar. 20, 2008	3170	0	0	3170
Mar. 21- Apr. 20, 2008	4947	0	0	4947
Apr. 21- May 20, 2008	3853	0	0	3853
May 21- Jun. 20, 2008	3051	0	0	3051
Jun. 21- Jul. 20, 2008	5898	0	0	5898
Jul. 21- Aug. 20, 2008	6795	0	0	6795

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Total	50303	0	0	50303
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