MONITORING REPORT

Version 03

Wutuhe Erji Hydro Power Project

in Guizhou Province, China

Monitoring period: 26/07/2008 To 25/02/2010

Date: 02/08/2010

Revision history of this document

Version Number	Date	Description and reason of revision
01	15/03/2010	Initial edition to DOE
02	01/06/2010	Revised edition to DOE
03	02/08/2010	Revised edition to DOE

CONTENTS

1. Introduction

This document reports the emission reductions generated by Wutuhe Erji Hydro Power Project in Guizhou Province, China, during the following monitoring period: 26/07/2008 to 25/02/2010.

2. General description of the project

2.1 Project activity

Wutuhe Erji Hydro Power Project in Guizhou Province, China (here after referred as "the proposed project") is 7.5MW (3×2.5MW) and the estimated annual electricity generation is 31210MWh and the estimated annual net electricity supplied to the grid by the project is 28060 MWh..The proposed project owner is Wutuhe Hydro Power Development Co.,Ltd of Liupanshui Tuoyuan Group Co.Ltd.. The electricity generated by the proposed project finally connected to China Southern Power Grid (CSPG) and reduce GHG emission of CSPG which is dominated by fossil fuel power generation. The estimated annual GHG emission reductions are 24445 tCO_2e.

2.2 Technical description of the project

Location of the project activity

The proposed project is located in the Town of Huaga, Shuicheng County, Liupanshui City in Guizhou Province, China. The geographical coordinates of the power house are east longitude 104°56′31″ and north latitude 26°05′30″, and the geographical coordinates of the dam are east lonitude 104°55′13″ and north latitude 26°05′09″.

Technology employed by the project activity

The key technical data for the proposed project are summarized in the following table.

Items	Features
Installed Capacity	7.5MW
Type of the turbine	HLJF2504-WJ-69
Type of the generators	SFW2500-6/1430
Flux used for power generation	10.8m^3/s
Weighted average water head	88.2m

The main construction works include barrage (dam), hydropower tunnel, power house, booster substation and electricity transmission lines etc. The height of the dam is 22 m. The length of the intake power tunnel is 2155 m long with a section of 2.4×3.19 m. The generated electricity is delivered to 35kV Yezhong substation, and finally delivered to the China Southern Power Grid (CSPG). Domestic technology is adopted by the proposed project, and there is no technology transfer.

3. Monitoring methodology

The methodology applied for the proposed project is the approved methodology for small-scale CDM project- "AMS-I.D. Renewable Energy Projects-Grid connected renewable electricity generation" (version 13).
Furthermore, the "Tool for the Emission Factor Calculation of Electricity System" (version 1.1) is also quoted. In keeping with the monitoring methodology, the following parameter needs to be monitored for the project:

The aim of the monitoring plan

Monitoring is a key procedure to verify the real and measurable emission reductions from the proposed project. And, to guarantee the proposed project's real, measurable and long-term GHG emission reductions, the monitoring plan has established. The monitoring plan is carried out practically in line with the referred VCS PD Monitoring Plan.

The data needed to be monitored

- Net electricity delivered to the grid (EG_y)

ID	Data type	Data variable	Data unit	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	For how long is archived data kept?
$EG_{P\ To\ G}$	Electricity	Electricity exported to the grid	kWh	Recorded on a daily basis	100 %	Electronic with paper back-up	During the crediting period and two years after
$EG_{G\ To\ P}$	Electricity	Electricity imported from the grid	kWh	Recorded on a daily basis	100 %	Electronic with paper back-up	During the crediting period and two years after

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

4.1 QA/QC procedures

ID	Uncertainty level of data (High/Medium/Low)	Explain QA/QC procedures planned for these data, or why such procedures are not necessary

$EG_{P\ To\ G}$	Low	The measurement/ monitoring equipment should be implemented according to the requirements of the Technical Administrative Code of Electric Energy Metering (DL/T448-2000). These equipment and systems should be calibrated and checked. The local power grid company is responsible for the maintenance and calibration of the gateway meter once a year. The data can be accurately measured by the gateway meter M1 installed in the power station and continuously recorded by the staffers of the proposed project, and it will be directly used to calculate emission reductions. The sum of monthly exported electricity and the related electricity receipts (viz. Balance Advice Note (BAN) issued by the local grid company on monthly basis) are supplied to the proposed project owner as an additional check for quality control.
$EG_{G\ To\ P}$	Low	The measurement/ monitoring equipment should be implemented according to the requirements of the Technical Administrative Code of Electric Energy Metering (DL/T448-2000). These equipment and systems should be calibrated and checked. The local power grid company is responsible for the maintenance and calibration of the gateway meter once a year. The data can be accurately measured by the gateway meter M1 installed in the power station and continuously recorded by the staffers of the proposed project, and it will be directly used to calculate emission reductions. The sum of monthly imported electricity and the related electricity receipts (viz. Balance Advice Note (BAN) issued by the local grid company on monthly basis) are supplied to the proposed project owner as an additional check for quality control.

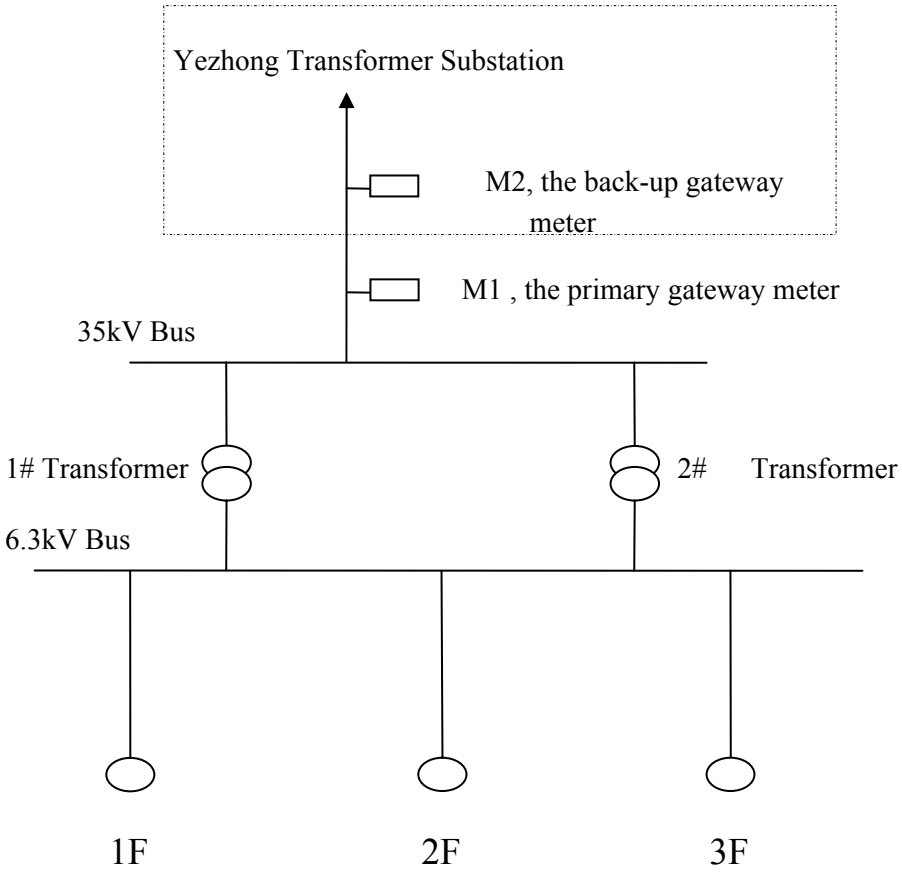


Figure 1 power connection diagram

4.2 Information about the meters

	M1 Gateway meter	M2 (Back-up meter)
Definition	0.5	0.5s
Serial number	200408406Q0028	090056
Location	Generator export (in the power station)	Yezhong transformer substation
Calibration Certificate Valid Period time	12/06/2008 to 11/06/2013	13/05/2008 to 12/05/2013
On-site calibration	16/062008	15/05/2008
	15/062009	15/052009

Before operation, the meters were delivered to the authorised third party for calibration. After calibration certificates of the meters issued, the meters are sealed with a qualification label by the local grid company.

4.3 Roles and responsibilities

Mr.Wuchao is nominated to take the full responsibility for the implementation of the monitoring plan by the proposed project owner. In addition, the monitoring plan carried out on site clearly states, the other 2 persons who are involved in the monitoring of the project.

5. GHG Calculations

According to the methodology: $ER_y=BE_y-PE_y-L_{y.}$

5.1 Project activity emissions

According to the methodology AMS-I.D. (version 13), there is no emissions from the project activity. So:
$PE_y=0.$

5.2 Leakages

According to baseline methodology AMS-I.D.(version 13), there is no need for the project to consider leakage. Besides there is no fossil fuel engine/generator which is in place for emergency purpose during the monitoring period. The leakage from the project is zero. Thus:
$L_y=0.$

5.3 Baseline emissions

Electricity exchanged with the grid

Period	$EG_{P\ to\ G}$ (MWh)	$EG_{G\ to\ P}$ (MWh)	EG (MWh)
	A	B	C=A-B
26/07/2008-25/08/2008	5250.56	0.00	5250.56
26/08/2008-25/09/2008	2668.26	0.00	2668.26
26/09/2008-25/10/2008	3688.44	0.00	3688.44
26/10/2008-25/11/2008	3863.44	0.00	3863.44

26/11/2008-25/12/2008	1422.26	0.00	1422.26
26/12/2008-25/01/2008	1757.98	0.00	1757.98
26/01/2009-25/02/2009	867.72	0.28	867.44
26/02/2009-25/03/2009	543.76	0.42	543.34
26/03/2009-25/04/2009	509.88	0.14	509.74
26/04/2009-25/05/2009	1686.16	0.28	1685.88
26/05/2009-25/06/2009	3253.46	0.00	3253.46
26/06/2009-25/07/2009	4370.52	0.00	4370.52
26/07/2009-25/08/2009	4746.00	0.42	4745.58
26/08/2009-25/09/2009	2015.30	0.28	2015.02
26/09/2009-25/10/2009	1032.78	0.42	1032.36
26/10/2009-25/11/2009	796.60	0.28	796.32
26/11/2009-25/12/2009	565.46	0.14	565.32
26/12/2009-25/01/2010	434.42	0.42	434
26/01/2010-25/02/2010	355.32	0.28	355.04
Total (from 26/07/2008-25/02/2010)	39828.32	3.36	39824.96

The above-mentioned parameters will be confirmed in the following steps.

Baseline Emission Reduction (BE_y)

Baseline emission is calculated as follows:

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

BE_y: the baseline emission in year y (tCO2/year)

EG_y: the net electricity exported (MWh).

$EF_{grid,CM,y}$ is Combined margin CO_2 emission factor for grid connected power generation in year y, the calculation is according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system.

$$EG_y = EG_{P\ to\ G} - EG_{G\ to\ P}$$

Where
EGy – net power transmitted to the grid (MWh);

$EF_{grid,CM,y}$ – emission factor

$EG_{P\ to\ G}$ – exported electricity to the grid
$EG_{G\ to\ P}$ – imported electricity from the grid

The baseline emission BEy during the monitoring period can be calculation by the formula below:
$EGy= EG_{P\ to\ G} –EG_{G\ to\ P}$=39,828.32–3.36=39,824.96 (MWh)

$BE_y = EG_y \times EF_{grid,CM,y}$ =39,824.96×0.8712 = 34,696(tCO2e)

5.4 Emission reductions

Calculation of Emission Reduction (ER_y)

For project activities the VERs in year y can be calculated as follows:

$ERy=BE_y-PE_y-L_y$

ER_y: the emission reduction in year y associated with the project.

BE_y:the baseline emission in year y.

PE_y: the project emission in year y associated with the project.

L_y: the leakage in year y associated with the project.

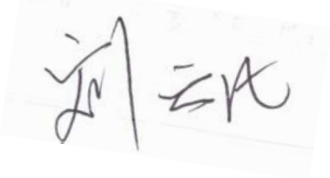
The final GHG emission reduction (ER) is calculated as follows:

$ERy=BE_y-PE_y-L_y$ =34,696–0–0=34,696(tCO2e)

Emission reduction of the proposed project in the monitoring period is 34,696 tCO2e.

We have checked the monitoring report of Wutuhe Erji 7.5MW Hydro Power Project. We think that the data mentioned in the report is accurate and description of the report is real.

Signature of Authorized representative: Liu Yunfan



6. Description of emission reductions

It is indicated in PD that the runoff from 26/07/2008 to 25/02/2010 accounts for a year and seven months.The estimated emission reductions are 24,445tCO_2e per year.Thus the estimated emission reductions during this period is:

$$24{,}445\ tCO_2e\ (\text{in PD}) \times (1+\frac{7}{12}) = 38{,}705\ tCO_2e)$$

The estimated emission reductions 38,705 tCO_2e according to the PD during the monitoring period is higher than the actual emission reductions 34,696 tCO_2e.