

Monitoring Report

China Xiaogushan Hydro Power Project

(UNFCCC Registration Reference Number 0378)

Monitoring Period: May 12, 2006 to December 31, 2006

Xiaogushan Hydro Power Co. Ltd.

2006 Monitoring Report on ER of CO2 for CDM Xiaogushan hydropower project

Under the mutual support and effort, after 30 months of tight implementation, in July 2006, 3 units of XHP were fully commissioned and generated scheduled ER, which had been done certain contribution to the emission reduction of GHG and protection of environment. Now we submit the report in terms of generation on the result for internal monitoring in past year as following:

I. Project description

The station is located in the territory of Sunan Yugu minority autonomous county, Zhangye city, Gansu province. It is the sixth cascading hydropower station in the Heihe hydropower cascading development plan, with an designed installation capacity of 102MW, annual generation of 391GWH, and total investment of RMB701 million Yuan. It is a middle scale category III project.

The station was started the construction in Oct. 2003. In May 12, 2006, the first unit was commissioned, in July 29, 3 units were commissioned completely. The advanced completion of the project exerted earlier benefits of the project.

II. the implementation of safeguard plan

Per the ERPA reached between World Bank and XHC, the annual

tasks set in action plan had been fully completed.

The input of the World Bank funds had exerted an active function to improve the environment of project area and lives standard of local people, stimulate the local economy, enrich the spiritual and cultural life, and constitute the harmonious community.

III. generated ER

The hydropower station has been running smoothly since the commissioning of the station in May 2006, the annual generation had surpassed the original schedule. The monitoring and records of electricity generated followed strictly the procedure stipulated in CDM manual (Refer to Annex 4 of the PDD), the operation is complying with criteria and national regulation, and the data is accurate and reliable.

1、 metering of generation. The monthly generation metering of Xiaogushan hydropower station is monitored on the interface between Xiaogushan hydropower station and the grid by regulation and communication center under Gansu provincial power bureau(hereunder Abbreviated as GPBRCC) and Xiaogushan hydropower company mutually, but at different spot, through 2 ways: automatic and manual. The regulation center will obtain the data through the automatic monitoring apparatus, which indicate the generation amount at the interface between Xiaogushan hydropower

station and the grid in 24:00 p.m. the day at the end of each month; Xiaogushan hydropower company will also allocate a special registrar to get to 110kv Heihe switchyard at 24:00 p.m. the day at the end of each month to register the figure on the main meter manually; GPBRCC will notify Xiaogushan hydropower company the available generation data in the form of power purchase settlement notice, based on data available from auxiliary meter at Xiaogushan site and main meter in Heihe switchyard, we make comparison and give clearance, then the settlement will be done based on the notified generation from Gansu grid. The detailed metering figures were shown below:

(1) Comparison table of data between auxiliary meter and main meter			
Month	Generation on auxiliary meter(MWh)	Generation on main meter (MWh)	Differences(MWh)
5	7070.000	7010.661	59.339
6	11186.000	11087.067	98.933
7	21663.000	21330.778	332.222
8	63742.000	62619.551	1122.449
9	65692.000	64614.334	1077.666
10	48843.000	48104.108	738.892
11	24104.000	23759.454	344.546
12	13194.000	12999.078	194.922
Total	255494	251525.031	3968.969

Xiaogushan hydropower project generated 255,494MWh electricity in a whole year, the differences of figures for main meter and auxiliary meter is 3968.969MWh, which is within the range of normal loss.

(2) The comparison table of data available from main meter monitored separately by provincial regulation center

Month	GPBRCC (MWh)	110KV Heihe switch yard(MWh)	Differences(MWh)
5	7010.661	7010.432	0.229
6	11087.067	11083.248	3.819
7	21330.778	21337.888	-7.11
8	62619.551	62617.104	2.447
9	64614.334	64614.352	-0.018
10	48104.108	48104.672	-0.564
11	23759.454	23758.240	1.214
12	12999.078	13000.240	-1.162
TOTAL	251525.031	251526.176	-1.145

There are certain differences between 2 groups of figures, which was caused by the different ways of monitoring, GPBRCC use remote automation monitoring on main meter, local people monitored the data manually going to the spot, that can't be happen right at the same time, so the time latency is the reason to lead to the discrepancy of data, which won't cause any mistakes for metering since the total number in a year is confirmed. The monitored data available from our side are served as a referential figure to compare with the one from GPBRCC

in case there are any mistakes incurred during the monitoring activities by GPBRCC, and then we have the opportunity to rectify it. In 2006, there are no mistakes in the metering procedure. According to current way of metering, the differences between 2 groups of data are quite normal.

2、 Annual generation and ER generated。 According to the data available from GPBRCC, in 2006, the power sold to the grid by Xiaogushan hydropower plant is 251525.031MWh in total and ER credits generated is 216814.58tonne, the calculation procedure is as following:

Step1: calculation for annual generation

Annual generation=sum of sold generation (detailed figure see table 3)

=251525.031MWh

Step 2: Calculation for annual ER of CO₂

Annual ER=annual generation (MWh) * fixed ER factor
(tCO₂/MWh)

=251525.031MWh * 0.862 tCO₂/MWh

=216814.58 tCO₂

(3) Annual generation table			
Month	Monthly power sold to the grid(MWh)	ER factor(tCO ₂ /MWh)	tCO ₂
5	7010.661	0.862	6043.19
6	11087.067	0.862	9557.05
7	21330.778	0.862	18387.13
8	62619.551	0.862	53978.05
9	64614.334	0.862	55697.56
10	48104.108	0.862	41465.74
11	23759.454	0.862	20480.65
12	12999.078	0.862	11205.21
Total	251525.031	0.862	216814.58

Attachments:

- 1、 power purchase settlement notice to XHP by Gansu grid
- 2、 Xiaoggushan company's Invoice for monthly sold power to the grid.

Signature of Authorized representative:



Jan 25, 2007