

2008 Monitoring Report

for

Xiaogushan Hydropower Project in People's Republic of China

(Reference number of the project in UNFCCC EB: 0378)

Monitoring period: Jan.1-Dec. 31,2008

Gansu Zhangye Xiaogushan hydropower Co. Ltd. (XHC)

Monitoring Report on CER generated by XHC in 2008

We submit the monitoring result in terms of generation in 2008 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.

The station was fully commissioned since July 2006 and began to avail benefits.

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 these 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 first unit 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, 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 Grid Power Trading Center under Gansu provincial power company(former regulation and communication center under Gansu provincial power bureau)(hereunder Abbreviated as) and Xiaogushan hydropower company mutually, but at different spot, through 2 ways: automatic and manual. The trading center(PGTC) 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; PGTC 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:

Table 1: Comparison table of data between auxiliary meter and main meter			
Month	Generation on auxiliary meter(MWh)	Generation on main meter (MWh)	Differences(MWh)
1	7134.000	7065.960	68.040
2	4330.000	4279.264	50.736
3	12786.000	12655.087	130.913
4	30155.000	29802.080	352.920
5	42564.000	41972.480	591.520
6	40978.000	40442.793	535.207
7	68280.900	67175.926	1104.974
8	74841.190	73527.520	1313.670
9	69583.710	68622.400	961.310
10	51837.000	51129.584	707.416
11	22991.200	22762.256	228.944
12	14692.000	14484.800	207.200
Total	440173.000	433920.151	6252.849

Xiaogushan hydropower project generated 440173.000MWh electricity in a whole year, the differences of figures for main meter and auxiliary meter is 6252.849 MWh, which is within the range of normal loss.

Table 2: The comparison table of data available from main meter monitored separately by PGTC and XHC
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Month	PGTC (MWh)	110KV Heihe switch yard (MWh)	Differences(MWh)
1	7065.960	6910.200	155.760
2	4279.264	4131.600	147.664
3	12655.087	12579.600	75.487
4	29802.080	29673.600	128.480
5	41972.480	41923.200	49.280
6	40442.793	40332.600	110.193
7	67175.926	67234.200	-58.274
8	73527.520	74028.900	-501.380
9	68622.400	68636.700	-14.300
10	51129.584	51130.200	-0.616
11	22762.256	22855.800	-93.544
12	14484.800	14586.000	-101.200
TOTAL	433920.151	434022.6	-102.449

There are certain differences between 2 groups of figures, which was caused by the different ways of monitoring, PGTC 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 PGTC in case there are any mistakes incurred during the monitoring activities by PGTC, then we have the

opportunity to rectify it. In 2008, 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 PGTC, in 2008, the power sold to the grid by Xiaogushan hydropower plant is 433920.151MWh in total, ER credits generated is **374039** tonne. The calculation procedure is as following:

Step1 : calculation for annual generation

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

=433920.151 MWh

Step 2 : Calculation for annual ER of CO₂

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

= 433920.151 MWh*0.862 tCO₂/MWh

= **374039** tCO₂

Table 3: Annual generation for ER credit			
Month	Monthly power sold to the grid (MWh)	ER factor(tCO ₂ /MWh)	tCO ₂
1	7065.960	0.862	6090.86
2	4279.264	0.862	3688.73
3	12655.087	0.862	10908.68
4	29802.080	0.862	25689.39
5	41972.480	0.862	36180.28
6	40442.793	0.862	34861.69
7	67175.926	0.862	57905.65
8	73527.520	0.862	63380.72
9	68622.400	0.862	59152.51
10	51129.584	0.862	44073.70
11	22762.256	0.862	19621.06
12	14484.800	0.862	12485.90
Total	433920.151	0.862	374039.17

Attachment :

1、 power purchase settlement notice to XHP by Gansu grid

Signature of Authorized representative :

Revised January 5, 2009