

Monitoring Report

Voluntary Carbon Standard v. 1

Yangcun Hydropower Project

Monitoring Period: 01/01/2004-31/05/2007

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1. Project Background

By means of this Monitoring Report greenhouse gas emission reductions achieved by the project activity “Yangcun Hydropower Station” are being verified and certified as per requirements of the Voluntary Carbon Standard, Version 1.

Further background information on the project activity can be found in the Project Design Document (PDD) and associated documents, which have also been submitted for validation as per requirements of the Voluntary Carbon Standard, Version 1. The PDD and associated documents are available upon request.

2. Monitoring Background

Section B of the PDD (Application of the baseline and monitoring methodology) provides all details in regard to calculation of emission reductions and the monitoring plan to be followed by the project activity. Both the emission reduction calculations and the monitoring plan are based on the approved CDM methodologies AMS-I.D., Version 11 and ACM0002, Version 6.

3. Monitoring Results

3.1. Monitoring period

This is the first monitoring report of this project activity. It covers the period 01/01/2004 to 31/05/2007.

3.2. Presentation of monitoring results

All monitoring data is available in an Excel spreadsheet “Yangcun – Monitoring Data”. The spreadsheet includes:

1. A summary worksheet containing the results of the VER calculations for every year of the monitoring period
2. Worksheets for every year of the monitoring period containing the VER calculations

3.3. Metering equipment accuracy

Metering equipment JCC3-110 and L86-110 are periodically controlled and reach an accuracy of 0.5% and 0.2% respectively.

3.4. Calculation methodology

Emission reductions were calculated on the basis of following formulae:

Emission Reductions = Baseline Emissions – Project Emissions – Leakage

where:

Baseline Emissions = Net Electricity Export x Grid Emission Factor

Project Emissions = 0

Leakage = 0

Hence, the calculation of emission reductions resumes to following steps:

1. Amount of net electricity delivered to the grid is recorded daily and aggregated monthly
2. Monthly figure is multiplied by the Grid Emission Factor calculated as per methodology ACM0002. Grid Emission Factor was calculated in PDD to be 0.94445 t CO₂e/MWh.
3. As no project emissions and no leakage need to be accounted for, net emission reductions for the specified monitoring period are equal to baseline emissions

3.5. Emission reductions

The calculated emission reductions achieved by the project activity within the covered monitoring period amount to 704,878 t CO₂e.

4. Summary of Monitoring Data and Results

A summary of monitoring data and emission reductions based on aggregated data on a monthly basis are provided in the table below:

Year	Month	Electricity produced (kWh)	Electricity used in plant (kWh)	Electricity losses (in plant, kWh)	Electricity used in living area surrounding plant	Net Electricity exported (kWh)	Emission Reductions (tCO ₂ e)
2004	January	11701920	18150	131900	27990	11523880	10'884
	February	11726720	19180	103320	18690	11585530	10'942
	March	18356600	21700	129420	15930	18189550	17'179
	April	34051360	28100	181070	12180	33830010	31'951
	May	37795880	20540	219290	9540	37546510	35'461
	June	39949280	25460	231040	8700	39684080	37'480
	July	33209800	24190	199600	10560	32975450	31'144
	August	42063800	35070	308120	10980	41709630	39'393
	September	44799600	30490	383900	9600	44375610	41'911
	October	33443080	22440	193400	12310	33214930	31'370
	November	27520960	19460	166900	12590	27322010	25'804
	December	16430800	21040	120000	18950	16270810	15'367
	Total	351'049'800	285'820	2'367'960	168'020	348'228'000	328'884

Year	Month	Electricity produced (kWh)	Electricity used in plant (kWh)	Electricity losses (in plant, kWh)	Electricity used in living area surrounding plant	Net Electricity exported (kWh)	Emission Reductions (tCO ₂ e)
2005	January	12214760	29800	104600	24440	12055920	11'386
	February	11331400	28900	129400	21890	11151210	10'532
	March	18273080	28080	201180	17520	18026300	17'025
	April	25858760	32130	275010	14160	25537460	24'119
	May	36372040	33520	323160	9780	36005580	34'005
	June	41321600	36920	381580	9660	40893440	38'622
	July	44641240	38480	361340	11620	44229800	41'773
	August	46527480	38950	388220	12140	46088170	43'528
	September	38757200	33810	327600	10260	38385530	36'253
	October	34892240	28090	240560	11280	34612310	32'690
	November	25761360	14980	187140	17400	25541840	24'123
	December	15543200	31580	130240	31200	15350180	14'497
	Total	351'494'360	375'240	3'050'030	191'350	347'877'740	328'553

Year	Month	Electricity produced (kWh)	Electricity used in plant (kWh)	Electricity losses (in plant, kWh)	Electricity used in living area surrounding plant	Net Electricity exported (kWh)	Emission Reductions (tCO ₂ e)
2006	January	10015560	31360	50000	33000	9901200	9'351
	February	12113280	30940	85120	22800	11974420	11'309
	March	14944840	32090	169170	16200	14727380	13'909
	April	20391600	28970	232770	19800	20110060	18'993
	May	24197520	26800	287390	10800	23872530	22'546
	June	35655440	29910	368370	10200	35246960	33'289
	July	37007520	33570	407030	15000	36551920	34'521
	August	26370440	32660	322710	16800	25998270	24'554
	September	37391240	33030	384710	13200	36960300	34'907
	October	37206600	30820	391430	10200	36774150	34'731
	November	32939320	32420	359700	15600	32531600	30'724
	December	19782280	35940	181560	18420	19546360	18'461
	Total	308'015'640	378'510	3'239'960	202'020	304'195'150	287'297

Year	Month	Electricity produced (kWh)	Electricity used in plant (kWh)	Electricity losses (in plant, kWh)	Electricity used in living area surrounding plant	Net Electricity exported (kWh)	Emission Reductions (tCO ₂ e)
2007	January	13438480	38390	171600	48000	13180490	12'448
	February	14140400	37230	88270	25860	13989040	13'212
	March	14761760	32090	157450	19860	14552360	13'744
	April	22856800	30910	292410	14460	22519020	21'268
	May	30022720				30022720	28'355
	Total	95'220'160	138'620	709'730	108'180	94'263'630	89'027