

Summary of CDM/JI Feasibility Study Report, FY2009

03/2010

Tepia Corporation Japan Co., Ltd.

Title of the study

Waste Heat Recovery and Utilization Programme in Cement Industry, Chongqing, China.

Name of the company

Tepia Corporation Japan Co., Ltd.

Operating structure of the study

Subcontractor: Chongqing Clean Development Mechanism Technical Service Center

- Becomes the correspondent office of the host country for this study.
- Requests project owners to cooperate on the study, gathers necessary information and data, arranges field surveys.
- Is considering becoming Coordinating/Managing Entity (CME) for this PoA.
- After the PoA starts its operation, they are to search for candidate CPAs, and conclude contacts with project owners. They are also in charge of instruction on monitoring and its management, applications in China, and coordination with DNA.

1. Outline of the project

This programmatic CDM is aimed to recover and utilize the waste heat from the cement making process with a rotary kiln and generate electricity. It is expected to be registered as programmatic CDM (PoA). All the electricity generated in each small scale CDM programme activities (CPAs) which are to be the part of the PoA will be consumed in the each cement factories themselves. This will alternate the purchased electricity from the Central China Power Grid (CCPG) which is highly environmentally hazardous, and reduce GHG emissions.

There are many small-sized companies in the cement industry in Chongqing City, however, there are quite a few cases where they are not able to decide on the installation of waste heat recovery and power generation system due to requirement of a big amount of capital for the investment and its low profitability.

Implementing projects in the each cement factories as small-scaled CDM individually is not financially attractive enough as the power generation is relatively small in small-sized cement production lines and its amount of credits would be small. In order to make it easier for smaller projects to be realized as CDM, it should be aimed to register similar projects in Chongqing City to the EB as programmatic CDM.

Chongqing Clean Development Mechanism Technology Service Centre, hereafter referred as the CDM Centre, is to become CME for the PoA, and its geographical boundary is Chongqing City where is under the jurisdiction of the CDM Centre.

The first CPA is Chongqing Fufeng Cement Company 9MW Waste Heat Recovery for Power Generation Project, hereafter referred as CPA-1, and it will install waste heat recovery system and 9MW electricity generation system with a new 4,500tonnes/day rotary kiln cement production line. This system will generate 61,236MWh annually and it all will be consumed within the cement production line in the Fufeng cement factory, alternating the purchased electricity from CCPG. This is expected to reduce 52,225 tCO_{2e} of GHG emissions annually.

The project is scheduled to start generating electricity in October 2010.

- The applied methodology

AMS III.Q. “Waste Energy Recovery (gas/heat/pressure) Projects (Version 02)”

2. Contents of the survey

(1) Survey Subjects

- Chongqing City Government’s efforts on CDM and important facts.

Checked Chongqing City Government’s attitude towards CDM and its related policies or regulations, and investigated the impact of project implementation.

- Chongqing City’s actions for saving energy, environmental situation, its target and achievement.

Investigated Chongqing City’s energy and environmental pollution, to confirm the background of energy-saving projects, and investigate the influence on this programmatic CDM and its owners.

Investigated SO₂’s desulfurization situation in Chongqing City and referred it to assess effects of co-benefits.

- Industrial and environmental regulations.

Corroborated what kinds of production control and environmental regulations exist in Chongqing City in the policies of economic structural reforms and environmental regulations in China. Also, confirmed with the companies that participate this programmatic CDM whether or not these regulations would have influences such as production control or curtailment of factories.

- Coordinating/Managing Entity (CME).

The CDM Centre, an organization under the jurisdiction of Chongqing City Government, is to become CME.

Confirmed whether or not National Development and Reform Commission (NDRC), as China's DNA, allows them to be CME. Discussed who should play the CME role in case that NDRC did not.

- Programmatic CDM approval by Chinese Government.

Investigated Chinese Government's attitude towards programmatic CDM and its approval situation and confirmed whether or not there are any effects on the approval of this project.

- Proof of additionality.

Examined additionality from technical and financial points of views, referring to projects design related documents and application reports of CPA-1.

- Confirmation of the milestone of the project.

Examined the feasibility and confirmed the time frame as a CDM project, checking the progress and milestones of CPA-1.

- Monitoring items and its system.

Requested the project owners to establish monitoring system and set monitoring items. The projects owners are entirely responsible for monitoring, and the CDM Centre will instruct its daily management.

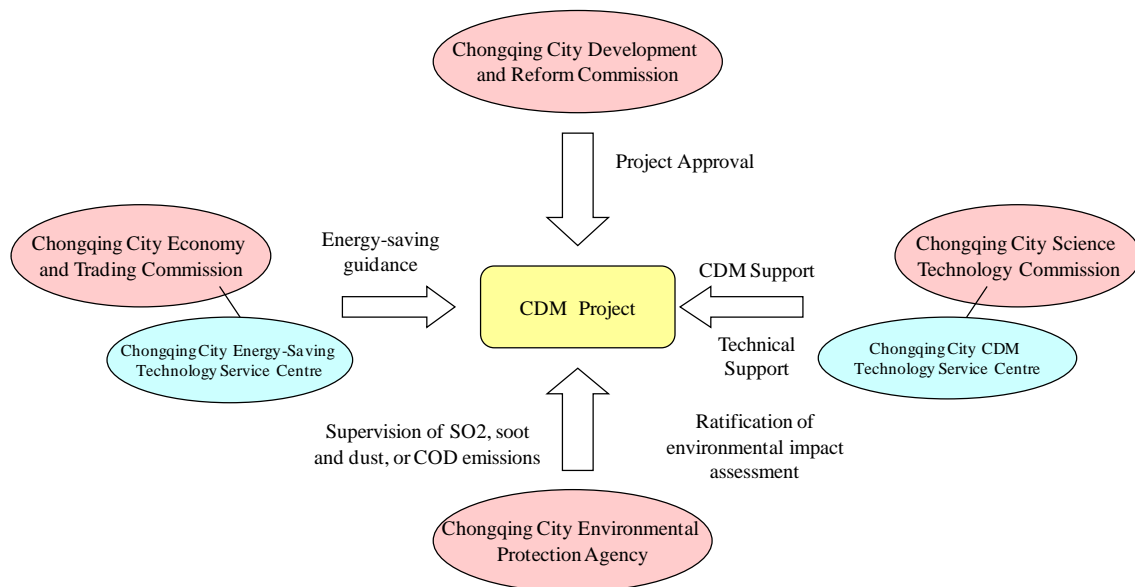
- Investigation on assessment of co-benefits.

Conducted quantitative assessment on the reduction of SO₂ etc by the project, based on the latest version of "Quantitative Assessment of Co-benefits", issued by Ministry of Environment of Japan.

(2) Survey Contents

- Chongqing City Government's efforts on CDM and important facts.

In Chongqing City, the daily CDM projects related operations are conducted by respectively as follows; energy-saving related operations by Economy and Trading Commission, environmental protection related operations by Environmental Protection Agency, daily management of CDM and technical support and service are operated by Science and Technology Commission.



In Chongqing City, Chongqing City Science and Technology Commission published “Chongqing City’s Scientific & Technological Actions on Climate Change” on 24th December, 2007, and on 30th September 2009, Chongqing City Development and Reform Commission published “Chongqing City’s Climate Change Programme”. It refers that it is the measure to make efforts in cooperation that extends beyond all the sectors.

Currently, Chongqing city put importance on biomass CDM projects. They also place importance on bio-fuel production in farm villages (producing diesels in each prefecture and using them as agricultural machinery), electricity generation when methane gas at pig farms, bio-digester projects in farms and are considering to make these CDM.

Although the government has not placed importance on waste recovery and power generation system yet, they are promoting it and expecting it to be realized.

- Chongqing City’s actions for saving energy, the environmental situation, its target and achievement.

In “11th Five-Years Plan”, Chongqing City’s pollution control target is to reduce 10% of COD and 5% of SO_s compared to 2005 by the end of 2010. By the end of 2008, COD was already reduced by 10% and achieved the goal 2 years earlier. SO₂ was reduced by 9.5% by the end of 2008 and it is expected to achieve the goal by 2010.

Chongqing City imposes environmental improvement targets assigned by the central government on relevant districts, prefectures, specialty organizations, companies, and conducts annual investigation, dividing responsibilities like “from National government to Chongqing City government to each district or prefecture government to each specialty organization and company”. The result of government’s investigation on Chongqing City in 2008 was “excellent”.

3. Survey results of CDM projects implementation.

(1) Establishment of baseline scenario and project boundary.

- Methodology

All the projects under this programmatic CDM are to adopt the latest version of approved small-scale methodology, AMS-III.Q. “Wastes Energy Recovery (gas/heat/pressure) Projects”.

To adopt AMS-III.Q., all the projects under this programmatic CDM have to meet the following conditions.

CPA-1, Fufeng Cement 9MW Waste Heat Recovery for Power Generation Project,

1. is the project that is to generate electricity by utilizing the waste heat from the cement making process.
2. reduces GHG emissions less than 60,000tonnes/CO_{2e} annually.
3. all the generated electricity is to be consumed in cement production line itself only.
4. its electricity generation is to be monitored by DCS system at all times.
5. would not be profitable without the CDM project. The electricity generation project would not be implemented and the waste heat was to be dissipated in the air.

Therefore, it meets all the conditions that methodology AMS-III.Q. requires.

- Baseline scenario

In absence of CDM, the project would not be carried out due to its poor profitability. Also, the waste heat was to be dissipated in the air as it cannot be utilized for any other purposes. Thus, the baseline was dissipation.

Electricity was to be purchased from the grid in the case of not implementing electricity generation from waste heat. Thus, the baseline grid is Central China Power Grid (CCPG) which covers Chongqing City.

Emission factor of grid electricity for this project adopts the latest emission factor of CCPG published by National Development and Reform Commission (NDRC) in 2009.

- **Project Boundary**

The boundary of the programmatic CDM is Chongqing City, China.

The boundaries of each CPA is, based on methodology AMS-III.Q, main facilities such as rotary kiln SP boilers, AQC boilers and its turbines, electricity generators and assisting facilities, and cement factories that consume electricity generated by this project, and CCPG grid whose purchased electricity is to be replaced by the electricity generated by this project.

(2) Project emission.

- **Project emission**

CPA-1 does not use auxiliary fuels for anything else but for preheating. Also, it uses the electricity generated by waste heat recovery for the electricity generator. Thus, the project emission is zero.

- **Leakage emission**

Leakage is not taken into account, according to methodology AMS-III.Q.

(3) Monitoring plans

Monitoring is to be conducted based on monitoring methods of AMS-III.Q. Main monitoring items are as follows;

1. Monitor electricity generated by the electricity generator and that of which is consumed in the cement making process. All the ammeters should meet the requirements of "People's Republic of China National Test Measures Regulations" (JJG596-1999), and they should be calibrated every year.

2. Measure the gross power generation that goes into turbine from the flow meter, its temperature and pressure.

In CPA-1, DCS system which is to be newly employed does automatic online monitoring.

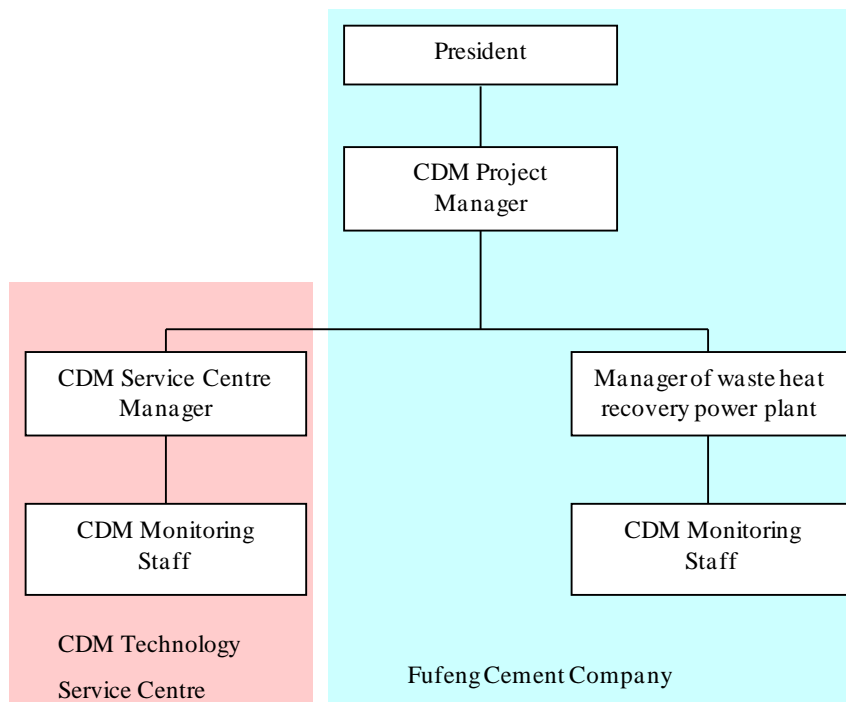
One of the ammeters is to be installed at the exit of the electricity generator to measure all the generated electricity, and the other at the transformer substation to measure the electricity consumed in the production line.

Also, ammeters that measure the flow, temperature and pressure are to be installed at the entrance of the SP boiler and AQC boiler, and another set of ammeter is to be installed at the exit of the turbine to measure vapor, temperature and pressure of waste heat.

CDM project manager will be appointed by general manager and be entirely responsible for project monitoring, including recording and safekeeping data, administrating ammeters, administrating and regulating ammeters, reporting, and calculating emission reduction.

CDM project manager will be supervising two managers of the CDM Centre and waste heat recovery power plant, and they will be supervising one CDM monitoring inspector each.

Monitoring inspectors should attend proper technical trainings, the president of the project conducts inspections on records and reports on a regular basis.



Operation and management-level monitoring implementation chart

(4) Estimated amount of GHG emission reduction

	Project Emission (tCO _{2e})	Baseline Emission (tCO _{2e})	Leakage (tCO _{2e})	Emission Reduction (tCO _{2e})
2010	0	87,04	0	87,04
2011	0	52,225	0	52,225
2012	0	52,225	0	52,225
2013	0	52,225	0	52,225
2014	0	52,225	0	52,225
2015	0	52,225	0	52,225
2016	0	52,225	0	52,225
2017	0	52,225	0	52,225
2018	0	52,225	0	52,225
2019	0	52,225	0	52,225
2020	0	43,521	0	43,521
Total (tCO_{2e})	0	522,250	0	522,250

(5) Duration of the CDM and its crediting period.

- Development of the programmatic CDM

Tepia Corporation Japan Co., Ltd. And the CDM Centre has concluded development affiliation on cement rotary kiln's waste heat recovery and utilization programmatic CDM on 28th October, 2008.

- CPA-1: Fufeng Cement Company 9MW Waste Heat Recovery for Power Generation Project

The work schedule of CPA-1 until the present and in future is as follows.

November, 2005	Preparation of environmental impact report (cement production line + waste heat power generation)
March 2008	Preparation of construction application documents (cement production line + waste heat power generation)
May 2008	Ratification of environmental impact assessment by Environmental Protection Agency of Hechuan District (cement production line + waste heat power generation)
August 2008	Ratification of energy saving criteria by Chongqing City

	Economy and Trading Commission (cement production line + waste heat power generation)
October 2008	Ratification of construction criteria by Chongqing City Economy and Trading Commission (cement production line + waste heat power generation)
October- November 2008	Implementation of detailed investment analysis
December 2008	Reexamination of the investment on waste heat recovery system
January 2009	Decision making on the CDM project by the executive committee
August 2009	Signing of construction contract and facility supply contract for the cement production line.
January 2010	Completion of construction of cement production line
March or April 2010 (scheduled)	Facility supply contract for waste heat recovery system (commencement of the project)
April 2010 (scheduled)	Commencement of construction of the waste recovery system
October 2010 (scheduled)	Completion of construction and commencement of electricity generation (Starting date of the crediting period is to be the start date of electricity generation or the date of registration to the EB, whichever is later)
	(Verification is to be conducted several times during this period.)
2020 (scheduled)	End of the crediting period

Construction of the waste heat recovery project is to be commenced from around April 2004, after the completion of the production line construction. The project duration is 20 years, same as the cement production line which is the source of waste heat.

Construction of the electricity generation is to be completed and to start generating electricity in around October 2010. The starting date of the crediting period will be the start date of electricity generation or the date of registration to the EB, whichever comes later.

(6) Environmental impacts and other indirect impacts

As for CPA-1, Chongqing Cement Company entrusted to Chongqing University and Chongqing Yu-Jia Environmental Impact Assessment Ltd., and they conducted environmental impact assessment in November 2005, and its report was ratified by Hechuan District Environmental Protection Agency in Chongqing City on 24th May, 2008. According to the report, the impacts of the project are as follows.

- Noise

The main source of noise reduction is waste heat boiler and turbo-generator. The noise level will be lowered to meet the national standard, by installing noise reduction devices on the waste heat boiler, using semi-closed building for turbo-generator, and planting trees around.

- Waste Water

3.8m³/h of waste water occurs in the process of boiler cooling water circulation and boiler feed water chemical treatment, and 14.4m³/h of it occurs in the process of water circulation system. However, the water does not contain any pollutants and it will be utilized for dust gathering spray, and the remainder will be discharged into the drains.

- Air pollution

More than 95% of SO₂ that occurs in the cement production line can be treated with chemical reactions in the process of rotary kiln. Also, Bug filters will be newly installed and remove ash and SO₂ contained in the discharged air from kiln and power generating unit. This will lower the amount of air pollutants to meet China's national standards.

(7) Stakeholders comments

As for CPA-1, questionnaires to the neighboring residents and companies, and organizations were conducted from 10th to 25th October, 2008, as a part of environmental impact assessment. Participants to the questionnaires and the numbers are as follows and the response rate was 100%.

Parties from the local government: 13

Representatives of the neighboring residents: 55

Representatives from the electricity sector: 12

Project design institution: 10

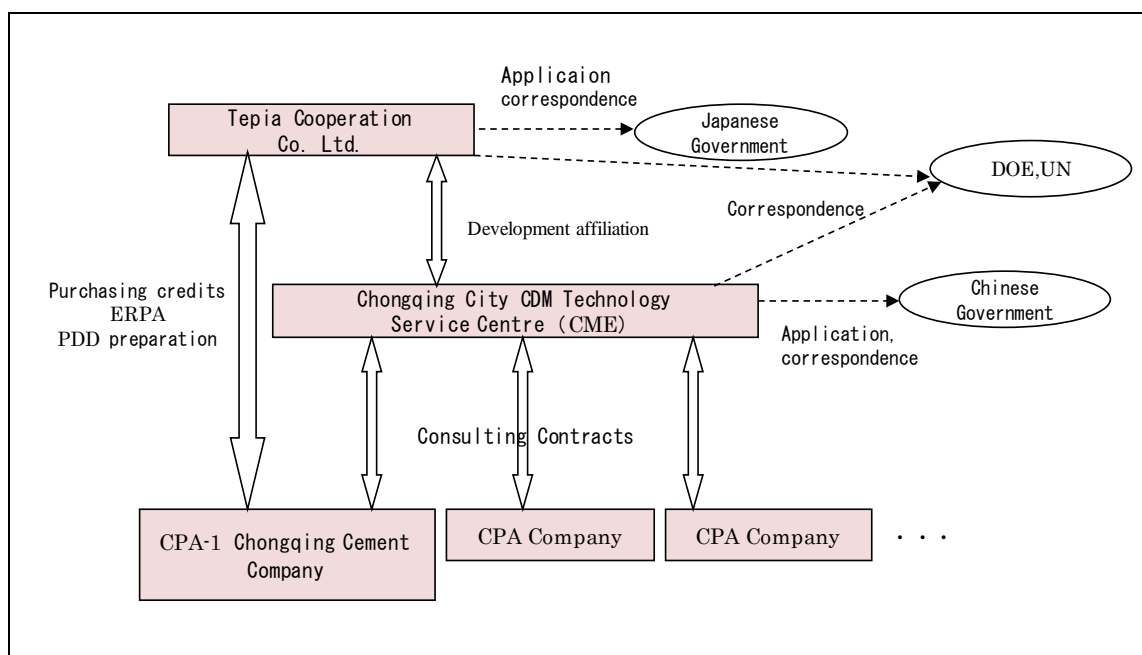
Consulting institution: 10

According to the questionnaires, 53% of the participants think that the current environment situation in the project site are is good, 98% think that there is no bad environmental impact in particular by the project in the site area, 96% think that there is no particular bad impact on the neighboring ecosystems, 92% think that there is no issues such as radio disturbance or whatsoever.

All neighboring residents agreed with the project implementation, and there was no negative opinion in particular on the project itself.

The construction of this project has been agreed by the stakeholders.

(8) Project implementation system



(9) Financial plans

As for CPA-1, the construction investment is 90 million Yuan RMB, adding 2 million Yuan RMB which is construction investment, as liquid capital.

According to the initial financing plan that Fufeng Cement Company made, all the fund of this project can be sourced by its owned capital and there is no need to take out a loan. Thus, it is not necessary to take the interest into consideration. Financing plan of this project is as follows.

(Unit: 10 thousands Yuen RMB)

	Subject	Total	1 st year	2 nd year	3 rd year
1	Total fund	9,000	9,000	0	0
1.1	Investment for fixed assets	9,000	9,000	0	0
1.2	Interest during construction	-	-	-	
1.3	Liquid funds	200	200	0	0
2	Financing	9,200	9,200	0	0
2.1	Project capital	9,200	9,200	0	0
2.1.1	Used for construction	200	200	0	0
2.1.2	Used for liquid funds	9,000	9,000	0	0
2.1.3	Used for interest during construction	0	0	0	0
2.2	Debts	0	0	0	0

2.2.1	Used for construction	0	0	0	0
2.2.2	Used for liquid funds	0	0	0	0
2.2.3	Used for interest during construction	0	0	0	0

(10) Investment Analysis

As for CPA-1, parameters used for the investment analysis conducted by the project owner are as follows. (These values were used to calculate profits, in order to make decisions on the CDM project.)

Parameters	Value	Ground
Power generation	64,800MWh/year	9MW*7,200h
Electricity supplied from the grid	61,236MWh/year	5.5% is consumed at the power plant
Project length	10 months (construction period) + 20 years	Set primarily
Total investment	90 million Yuen RMB	Set primarily
Liquid fund	2 million Yuen RMB	Set primarily
Annual operation and maintenance cost	11,941 thousand Yuen RMB	Set primarily
Electricity tariff	0.44 Yuen RMB/kWh	Historic average price of electricity from the grid
Income tax rate	25%	Chinese law
Value added tax rate	11%	Chongqing City's regulation
Urban construction and maintenance tax rate	7%	Chongqing City's regulation
Education tax rate	3%	Chongqing City's regulation
Annual GHG emissions reduction estimated	52,225tCO _{2e} /year	
Length of crediting period	10 years	
CER price	8.5€/tCO _{2e}	
Exchange rate	10Yuen RMB/€	Project owner's expected price
Credit paid to the Chinese Government	2%	Regulation of Chinese DNA

With the CER, IRR that is calculated from the above data is 9.04%, while it is 12.60% without CER.

(11) Assessment and demonstration of additionality

Assessment and demonstration of additionality is to be conducted in each CPA. Since each CPA is small-scaled, one out of the following analysis will be chosen to prove its additionality; 1). Investment barrier, 2). Technological barrier, 3). Barrier due to prevailing practice, 4). Other barrier.

In CPA-1, investment barrier was chosen to prove its additionality.

- Apply benchmark analysis

In CPA of this programmatic CDM, generated electricity will not be supplied to the grid, and is to be consumed in the cement production line. It has never applied for becoming the public electricity grids and Chongqing City Development and Reform Commission has already granted its permission for the construction of the power plants of its own within the cement plant. Thus, the investment benchmark to prove additionality with investment barrier will be 11% for cement industry sector on “Construction Project Economic Evaluation Methods and Parameters” (3rd edition, by Chinese Government), not the benchmark of electricity industry sector.

Also, the benchmarks of 11 similar cement waste heat recovery CDM projects in China that were registered to the EB in 2009 were surveyed and it was found out that some projects which adopted 11% benchmark in cement industry were recently registered to the EB, and even a project that adopted 18% benchmark as the company’s regulation was also registered. Thus, 11% benchmark is the lowest among other similar registered projects and it is considered conservative.

- Internal Rate of Return

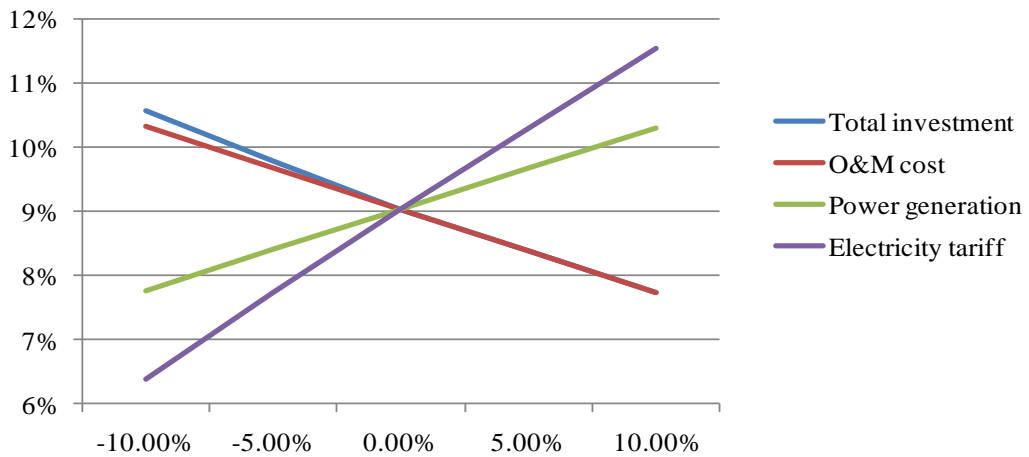
Calculated based on the data of (10) and the result is as follows.

Project	Unit	Without CERs revenue	With CERs revenue
IRR	%	9.04	12.60
benchmark	%	11	

- Sensitivity Analysis

Sensitivity analysis was conducted for total investment, O&M cost, power generation and electricity tariff in the range of -10% to +10%.

	-10%	-5%	0%	+5%	+10%
Total investment	10.39%	9.69%	9.04%	8.44%	7.89%
O&M cost	10.31%	9.68%	9.04%	8.39%	7.73%
Power generation	7.75%	8.40%	9.04%	9.67%	10.29%
Electricity tariff	6.39%	7.74%	9.04%	10.30%	11.53%



Sensitivity analysis of the project total investment IRR

From the result above, IRR does not go over 11% in total investment, O&M cost and power generation in the range of -10% to 10%.

When electricity tariff goes up by 10%, the calculated value of IRR goes up beyond the benchmark (11%). However, the central and provincial governments promulgate a tariff guideline periodically to avoid a rapid rise of the market price since the supply of electric power is directly linked to the residents' daily lives and production activities, and large sized business consumers such as industrial companies have the contracts for sale accordingly.

The government raises the price when there is rises in the total GDP, disposal income or prices. Thus, the increment of tariff shall accompany increment of the costs of operation and maintenance, such as labor costs, water price, expendable supplies etc.

The values of calculated IRR which do not account for the revenue of CERs are 10.91% and 10.29% respectively when considering 5% and 10% increment of O&M costs in the case of 10% increment in tariff electricity. That is to say, the project would face financial difficulties to be implemented as both values do not reach the benchmark (11%).

(12) Prospect of monetization

In CPA-1, the construction of the 4,500t/d cement production line which is to be newly established is almost completed.

As for the waste heat recovery system itself, although its construction has not started yet, the project has been granted the permission of the construction in October 2008, and it was decided by the executive committee that they are going to commence electricity generation at the point of January 2008.

The project site is located within Fufeng Cement Company's land and there will be no problem on possession of the site. Besides, there will be no investment and loan related problems as the whole funds will be invested by Fufeng Cement Company solely.

It is scheduled to start the construction of electricity generating facilities in April 2010, and to start generating electricity in October 2010.

To realize the programmatic CDM project, it is necessary that the CDM Centre attain its approval to become CME as a governmental organization. It needs to observe Chinese Government's trends to decide whether implementing programmatic CDM, appointing CME among the project owners, or implementing each project as small-scaled CDM projects when it is difficult to appoint CME.

4. Survey results of co-benefits

- Items assessed

This programmatic CDM is to replace the purchased electricity from the grid in the region, where the electricity is mainly generated from thermal power stations whose main fuel is coal, to the electricity generated from the waste heat recovery system. It is possible to assume that it may be indirectly reducing SO_s emission from the thermal power stations in the region. In this survey, quantitative evaluation of emissions of SO₂ is to be conducted.

- Baseline/project scenario

As electricity generated is supposed to replace the purchased electricity from the grid in the region, it is to be assumed that the same amount of the electricity which was supposed to be generated by the project would be generated by the power station which is connected to the grid, in absence of the project.

Chongqing Power Grid, a part of Central China Power Grid (CCPG), purchased 39,761 GWh of electricity from electric power companies in Chongqing City out of the whole electricity demand of 48,441 GWh in the city. That is to say, Chongqing City's self-sustenance rate of electricity is 82.08%, and most electricity demand is covered within the city.

As the data of pollutants discharged from industrial companies are compiled its statistics by each ministries, and the boundary of the programmatic CDM is Chongqing City, the baseline grid of SO₂ is Chongqing Grid in CCPG, which differs from the baseline grid of CO₂ reduction (CCPG).

The project scenario is SO₂ emission from this project activity. At this point of this survey, the values were sampled by the environmental impact assessment.

- Assessment of the baseline and its monitoring plans

The baseline for SO₂ is calculated, using values such as coal consumption per 1kWh of electricity generation, the content of sulfur in average coal in Chongqing City, and desulfurization rate at main electric power companies in the city which can be found in the statistic data published by government bodies.

For the request from environmental protection measures, after the commencement of the project, density of pollutants in discharged air and the total amount of discharged air have to be monitored at two spots in the chimneys. Thus, the project emission of SO₂ will use the values monitored under the environmental protection measures and calculated as follows; *Project emission = Total discharged air * SO₂ Density*

- Result of trial calculation and its process

Trial calculation result of SO₂ emission reduction, based on the data of 2007 Chongqing City's statistics and the result of environmental impact assessment, in accordance of "Co-benefit Quantitative Assessment Manual Version 1.0 (June 2009)", is as follows.

	Items	Data	Source
Coal consumption per 1kWh of electricity generation			
a.	Total coal consumption for electric power generation in Chongqing City	16,479,200tonnes	China Energy Statistical Yearbook 2008
b.	Total electricity generated in Chongqing City	28,800GWh	China Electric Power Yearbook 2008.
c.	Coal consumption per 1kWh	0.5722kg/kWh	a./b.*1,000
Content of sulfur in coal			

d.	Content of sulfur in coal in Chongqing	3.5%	Chongqing Municipal Bureau of Statistics
Desulfurization rate			
e.	SO ₂ emissions of electric power companies and heat supply companies (34 companies, 80 institutions)	332.3Mtonne	Chongqing Statistical Yearbook 2008
f.	SO ₂ removal of electric power companies and heat supply companies (34 companies, 80 institutions)	507.5Mtonne	Chongqing Statistical Yearbook 2008
g.	Desulfurization rate of electric power companies and heat supply companies (34 companies, 80 institutions, <i>BDR</i>)	60.4%	$f./(e.+f.)*100$
Baseline emission in CPA-1			
h.	Supplied electricity (excluding the consumption at the power plants)	61,236MWh/year	
i.	Substitute amount of coal (<i>BFC_y</i>)	35,039tonnes/year	$h.*c./1000$
j.	Baseline SO ₂ emission	970.5tonnes/year	$i.*e./100*64/32*(1-g./100)$
Project emission in CPA-1			
k.	Project SO _s emission	380.0tonnes/year	Environmental impact assessment report
Co-benefits impact in CPA-1			
l.	Emission reduction of SO _s	590.5tonnes/year	j. – k.

5. Survey results on contribution to sustainable development

China depends on coal for approximately 70% of the energy supply and faces serious problems of energy shortage and environmental pollutions. Hence, energy saving and replacement of fossil fuel by clean energy are demanded in the entire country. Moreover, in Chongqing City, electricity shortage is so serious that they had to limit the electricity supply in the shortage of electricity by more than 1,000MWh.

This project is applicable to Chinese Government and Chongqing City Government's energy-saving and energy structure reform policies. That is to say, it will assist the governmental policies and contribute to sustainable development.

Also, Chongqing City government recommends installing waste heat recovery and power generation system in NSP rotary kiln of cement production lines. This project is in total harmony with governmental policies for cement industry as well.

Thus, this project meets China's needs and policies and it is expected to contribute to China's sustainable development strategy.

With this project being implemented, there will create jobs for the construction, and they are planning to employ about 17 staffs after the completion of the construction in a long term.