

**COAL MINE METHANE DEVELOPMENT PROJECT
(SHANXI PROVINCE)**

RESETTLEMENT PLAN

CMM and CBM Production for Power Generation

Shanxi Jincheng Coal Mining Group Co., Ltd.

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
APs	Affected Persons
AAOV	Average Annual Output Value (over the last three years' harvest)
CBM	Coalbed Methane
CMM	Coal Mine Methane
CO ₂	Carbon Dioxide
DMS	Detailed Measurement Survey
GHGs	Greenhouse Gas
GoC	Government of China
HH	Household
LA	Land Acquisition
PPTA	Project Preparatory Technical Assistance
PRC	People's Republic of China
SEIG	Shanxi Energy Industries Group
SJCMG	Shanxi Jincheng Coal Mining Group
SJMGC	Shanxi Jincheng Municipal Gas Corporation
TGs	Township Governments
TVEs	Township and Village Enterprises
VCs	Village Committees

UNITS

<i>mu</i>	area; 15 <i>mu</i> = 1 ha
ha	area; 1 ha = 15 <i>mu</i>
m ²	square metre

1. INTRODUCTION

1.1 Project Background

Shanxi Province is one of the largest coal producing provinces in the People's Republic of China (PRC) and produced about one third of the PRC's total coal production in 2002 of about 0.5 billion tons. The production of coal in the PRC results in the emission of methane¹ as a greenhouse gas (GHG) into the atmosphere that could otherwise be used as an energy source. Such methane is referred as coalbed methane (CBM). When released into the atmosphere, GHGs contribute to global warming and methane is approximately 21 times more potent as a GHG than carbon dioxide (CO₂). However, it is not yet widely used as fuel in the PRC and it is estimated that annually PRC coal mines release about 1 billion cubic meter of CBM into the atmosphere.

The Asian Development Bank (ADB) is in an advanced stage of developing a CBM utilization demonstration project at Jincheng Prefecture in the southern part of Shanxi Province. The ADB Shanxi Methane Gas Demonstration Project consists of three sub-projects: 1) Coalbed Mining Methane (CMM) and Coalbed Methane (CBM) Production for Power Generation Sub-Project, owned by Shanxi Jincheng Coal Mining Group Co. Ltd. (SJCMG); 2) Coalbed Methane Transmission Pipeline Sub-Project owned by Shanxi Energy Industries Group (SEIG); and 3) Coalbed Methane Distribution Sub-Project, owned by Shanxi Jincheng Municipal Gas Corporation (SJMGC). The total investment of the Project is RMB 1.943 billion, including US\$138.4 million of ADB loan and RMB 798.882 million of Chinese counterpart funds.

1.2 PROJECT SCOPE

As one of the most important parts of the Overall Shanxi Methane Gas Demonstration Project, the CMM and CBM Production for Power Generation Sub-Project is owned by SJCMG which includes five components as follows:

1.2.1 Sihe Underground CMM Extraction and Power Generation

This sub-project includes the underground coal mine methane (CMM) extraction, coal mine methane fired power generation, and power transmission and distribution. The total investment is estimated at RMB 1077.05 million. Of this, US\$66.2 million will come from ADB loan.

1.2.1.1 Sihe Underground CMM Extraction

This component is designed to supply coal mine methane to the power plant at an annual capacity of 400 m³/min. It is located in the Sihe Mine, Yin Zhuang Village, Jiafeng Town,

¹ Methane is a non-toxic gas, which is the primary constituent (about 98%) of natural gas.

Qinshui County.

The Project intends to ensure the safe production in the mines, to introduce foreign advanced drilling equipments and hole sealing technology, and to enhance the extracting volume and concentration.

1.2.1.2 Sihe CMM Fired Power Plant

The CBM fired power plant will be located at the boundary of Qinzhuang Village, Yinzhuang Village, and Liuzhuang Village, Jiafeng Township, Qinshui County. The installed capacity of this project is 120 MW. The investment is RMB 807.24 million.

1.2.1.3 Power Transmission and Distribution Line

This is an internal power grid rehabilitation project by the SJCMG. It includes Sihe Comprehensive Utilization Power Plant and Chengzhuang Comprehensive Utilization Power Plant except the newly built Sihe CBM fired power plant. It is planned that a 110-kV power transmission and distribution line of 22-km will be constructed and 4 substations upgraded. The construction will last for one year. The total investment is RMB 10.77 million (excluding the investment of the Sihe CBM fired power plant).

1.2.2 Panzhuang Coalbed Methane Surface Extraction

Coalbed methane (CBM) demonstration well and group-well extraction experiments have been completed in the Panzhuang coal mine field. This project is the enlarged Panzhuang mine field CBM experiment at industrial size. It will also serve as the CBM gas source to the Jincheng municipal CBM gas transmission and distribution pipeline project and to the Panzhuang mine field compressed CBM storage and transportation project. It will involve a total of 20 vertical CBM wells and 1 directional well from the surface into coal seams, at an annual gas production capacity of 25 million Nm³. The total investment of the component is RMB 132.30 million, of which US\$ 9 million will come from ADB loan.

1.3 Socio-Economic Benefits of the Project

It is expected that the Project will bring about substantial socioeconomic benefits to the local populations residing in the Project beneficiary areas at large, particularly the poor segment, including the following benefits: i) increase of employment opportunities and income for local residents during the Project construction and operation; ii) value-added benefits through procurement of local materials; iii) stimulation of regional economic development; iv) increase of tax revenue to local government for poverty reduction; v) improvement of environment and health; improvement of mine workers' safety; vi) benefits of energy use from cooking and heating at the household level; vii) improvement of quality of life to local residents; and viii) benefits to the poor and women in particular.

1.4 Project Land Acquisition Impacts

The construction of the Sihe CMM Fired Power Plant will affect 23 households or 85 persons by permanent land acquisition. A total of 79.8 *mu* (5.32 ha) of land, including 62.1 *mu* (4.14 ha) of dryland, 15.3 *mu* (1.02 ha) of orchard land, and 2.4 *mu* (0.16 ha) of irrigated land, will be acquired permanently in the villages of Qin Zhuang, Yin Zhuang and Liu Zhuang. The construction of the Pan Zhuang Coalbed Methane Surface Extraction will affect 4 households or 18 persons, and one village collective. It will require 140.4 *mu* (9.36 ha) of land to be leased for 20 years² at maximum in Lizhuang Village, Jiafeng Township. The land lease will involve 13 *mu* (0.87 ha) from individual farmers (8 *mu* of dryland and 5 *mu* of paddy land), and the remainder 127.4 *mu* (8.49 ha) of wasteland from Lizhuang village collective.

The components of Sihe Underground CMM Extraction and Power Transmission and Distribution Line do not involve any land acquisition and resettlement. This is due to the fact that the project is to rehabilitate the existing power transmission lines and no construction will be undertaken, and the gas pipeline is only about 100 meter away from the CMM and CBM gas fields to the power plant and the land is owned by the SJCMG.

In sum, the total investment of the Project is estimated at RMB 1.209 billion, of which the budget for the LAR is estimated at RMB 9.9488 million.

1.5 Preparation of RP

1.5.1 Under the overall Shanxi Methane Gas Demonstration Project, two resettlement plans have been prepared separately: 1) RP for the CMM Transmission Pipeline Project and CMM Distribution Project; and 2) RP for the CMM and CBM Production for Power Generation Project.

This resettlement plan (RP) for the CMM and CBM Production for Power Generation Project has been developed in line with the ADB's Involuntary Resettlement Policy and the relevant laws, regulations and guidelines issued by the Government of China (GoC). The report is based on a series of information sources, including:

- (i) relevant project reports: the Project Feasibility Study Report;
- (ii) field visits to the proposed project sites from March 2003 to October 2003;
- (iii) measurement survey in August 2003;
- (iv) socio-economic survey in August 2003;
- (v) discussions with the related officials of the Qinshui State Land and Resources Bureau and City and Township Construction Bureau;
- (vi) consultations with various local governments, village leaders and APs.

² Although the land lease will be 20 years, the contract will be signed on the two-year base and renewed every two years.

The RP report is drafted by the SJCMG under the guidance of ADB PPTA Resettlement Specialist. It is also revised by ADB PPTA Resettlement Specialist who conducted review, consultations and field investigations.

For this project, TianYuan Real Estate Evaluation Consulting Co., Ltd. of Jincheng City has done the land evaluation and given "The Land Price Estimation Technology Report". The land price of this project is RMB 78,000 per mu, according to their evaluation and the comments of local Land Administration Department. SJCMG has done the wording amendment on the RP report, and confirmed this project land acquisition cost is RMB 78,000 per mu and has communicated with local government department and the APs at the end of August and the beginning of September, 2004. The local government and APs agreed with the revised RP and Resettlement Information Booklet.

2. SOCIO-ECONOMIC PROFILE OF AFFECTED PERSONS

To assess project impacts on the APs, 12 affected households in the villages of Qin Zhuang, Yin Zhuang, Liu Zhuang and Li Zhuang, Jiafeng Township, Qinshui County, were interviewed with the use of a questionnaire by the SJCMG and the Project preparation office of the Sihe CBM Fired Power Plant between August 1 and August 8, 2003. In total, the interviewed families have 51 family members.

2.1 Demographic Characteristics of the APs

Of the total affected population, 53.4% are male and 46.6% are female. The average age of surveyed population is 29.1 years, with the youngest being 6 and the oldest 62. As for marital status, 54.9% are married, 43.1% un-married, and 2% widowed. The illiteracy rate for the APs is 3.9%. Of the 103 affected persons in total, the number of persons in each household ranged from one to ten, with the average being 4.25.

The APs who finished primary school accounted for 9.8%, junior high 62.7%, senior high 23.6%.

2.2 Length of Residence in Present Community

According to the survey results, 66.7% of the total affected households have lived in the present community for generations, 16.7% for 10-20 years, and only 8.3% for 5-10 years and 2% for less than 5 years. Most residents have lived in their present communities for a considerably long time and have strong roots there.

2.3 Occupation and Household Income

The APs belong to three occupational categories. Farmers are the largest of the three professions at 80.5%, commercial cultivators and animal breeders 7.8% and others 11.8%.

The average annual per-capita net income stood at RMB 3,600 in 2002. The lowest was RMB 1,890 and the highest RMB 9,000. No households fall under the ADB poverty line of RMB 900 for rural residents.

2.4 Minority Households and Vulnerable Groups

There is no minority household in the affected population. For the purpose of this study, the most vulnerable groups can be classified into four general categories: i) households headed by women without a spouse; ii) households solely composed of one elderly; iii) households solely composed of two or more elderly (above the age of 60); and iv) households composed of the elderly without a male adult. The results of the survey show that there is no household belonging to the above four categories.

2.5 Preferred Options for Compensation and Resettlement

Of the total surveyed households, 28% wanted cash compensation for the loss of farmland, 59% wanted farmland re-allocation for compensation, 8% job for family member, 4% undecided and 1% unknown.

2.6 Willingness to Be Retrained

Many affected people expressed their willingness to be retrained for alternative employment opportunities, should such opportunities exist. In fact, 86.3% of those surveyed responded positively, 9.8% undecided and 3.9% did not answer.

2.7 Knowledge about Project and Land Acquisition

The results of social survey concerning the APs' knowledge about the project and the land acquisition show that there were 98.2% of the affected persons who learned of the project only for nearly half a year. The survey results also show that about 96.7% of the APs first heard of acquisition of their land for no longer than six months. The primary source of information was the project authorities/surveyors at 60.4% and neighbours at 4%, newspapers at 3.3% and meeting discussion at 33.3%.

2.8 Understanding and Attitudes

The affected people were largely positive about the prospect of receiving fair

compensation for their losses. In fact, 90% believed that they would get fair compensation, of which 80% consider that the compensation will be 2 to 3 times higher than normal, so they are willing to give their land for the construction of the Project. As a whole, 95% of the affected people agree with the Project and 5% do not know.

3. BASIC INFORMATION ON IMPACTS

3.1 Minimization of Land Acquisition and Resettlement

During the design stage of the projects, the minimization of land acquisition and relocation was taken into account. The following considerations have been incorporated into the selection of the project sites: 1) Avoid major infrastructure facilities and industrial enterprises; 2) Avoid or minimize existing and planned human settlements (rural and urban); 3) Avoid or minimize the occupation of good-quality cultivated land; 4) Utilize existing national and local roads to provide access to proposed project sites; 5) Avoid or minimize the use of areas with dangerous topographic features or poor geological conditions; and 6) Avoid or minimize the occupation of environmentally sensitive areas.

For the site selection of the Sihe CMM Fired Power Plant, two locations have been proposed: one is the West Plant Site and another is the East Plant Site. The “West Plant Site” (Scheme 1) is located at the east side of the Houyue Railway Line, north side of the Sihe Mine CBM Extraction Station and north-west side of the Sihe Mine Coal Plant. It will occupy 53,200 m² of land. The “East Plant Site” (Scheme 2) is located at the east side of Houyue Railway Line, which is 70 m away from the Yinzhuang Village at the south. It will occupy 55,300 m² of land. As Scheme 2 is closer to village and acquire more land (2,100 m² more) than Scheme 1. Therefore, the “West Plant Site” (Scheme 1) has been selected as the plant site of the Project. Since the land acquisition requirements are very small, the displacement of housing was avoided.

3.2 Types of Losses

From the measurement survey, the following categories of losses have been identified: 1) permanent loss of land: farmland (dryland, paddy land and orchard land) and non-farmland (wasteland); 2) land lease: farmers’ farmland and village collective land; and 3) loss of other productive assets, such as fruit trees, and standing crops.

3.3 Impact Identification

3.3.1 Baseline Information

The two components of Sihe Underground CMM Extraction and Power Transmission and Distribution Line do not involve any land acquisition and resettlement. But the Sihe CMM Fired Power Plant and Panzhuang CBM Surface Extraction will involve permanent land

acquisition and land lease of well sites for 20 years at maximum (the contract will be renewed every two years and the farmers will keep the land use right and the compensation). At the time of preparing this RP, the locations and areas of the Sihe CMM Fired Power Plant has already been finalized. The exact location of wells may be subject to change based on the suggestions of technical specialists and the adoption of new production technology and topographical condition. However, it is expected that the variations between final and current data will be minimal. Notwithstanding the above, once the final design is complete, a Detailed Measurement Survey (DMS) will be carried out to update the impact information and revise the costing figures accordingly, if necessary.

3.3.2 Scope of Land Acquisition Impact

Based on the census survey conducted by SJCMG in August 2003, the construction of the Project will affect four (4) villages in one (1) township of Qinshui County by permanent land acquisition and land lease. The affected communities include: the villages of Qinzhuang, Yinzhuang, Liuzhuang and Lizhuang, in the Sihe Township. The Sihe CMM-Fired Power Plant will affect 23 households or 85 persons and acquire 79.8 mu (5.32 ha) of land permanently, including 62.1 mu (4.14 ha) of dryland, 15.3 mu (1.02 ha) of orchard land, and 2.4 mu (0.16 ha) of irrigated land. The Panzhuang CBM Surface Extraction will affect 13 mu (0.87 ha) of individual farmers' land, of which 8 mu (0.53 ha) is dryland and 5 mu (0.33 ha) is irrigated land, and 127.4 mu (8.49 ha) of wasteland, owned by Lizhuang Village, which is not used by the collective for any activities. In total, 140.0 mu (9.36 ha) of land will be acquired. At present, approximately 80% of the farmers are engaged in farming activities and 20% in the coal mines as labourers. The summary impacts of the land acquisition of the Project are presented in Table 3.1 and Table 3.2. No demolition of houses will be involved in the Project. The degree of land acquisition impact is presented in Table 3.3. The percentage of land loss only ranges from 0.57% to 5.59% per village (Table 3.3). For those who are severely affected by land acquisition (over 10% of land loss), SJCMG will employ them as first priority for the new employment positions generated by the Project. The land compensation will go to the village committee to be used for developing wasteland into farming land to be reallocated to APs for economic crop cultivation, such as French onion with high output value (about RMB 4,000 to RMB 6,000 per mu). Therefore, the impact is not expected to be significant. In addition to other rehabilitation measures, the APs will benefit from the land acquisition if the resettlement plan will be properly implemented. The income of the APs after land acquisition is expected to increase. Table 3.4 presents the impact analysis of the income before and after land acquisition.

Table 3.1 Permanent Land Acquisition by Sihe CMM Fired Power Plant

County	Township	Village	No. of Affected Households	No. of Affected People	Permanent Land Acquisition (mu)			Total (mu)
					Dryland	Irrigated Land	Orchard Land	
Qinshui	Jiafeng	Qinzhuang	18	64	39.6	2.4		42
		Yinzhuang	Village Collective		10.05		15.3	25.35

	Liuzhuang	5	21	12.45			12.45
Total		23	85	62.1		2.4	15.3

Table 3.2 Land Lease by Panzhuang CBM Surface Extraction in Liuzhuang, Jiafeng Township

Category	No. of Affected Households and Persons				20 Year Land Lease (mu)			
	Total		Rural		Dryland	Irrigated Land	Waste Land	Total
	No. of HH	No. of Persons	No. of HH	No. of Persons				
Farmers	4	18	4	18	8	5		13
Collective							127.4	127.4
Total	4	18	4	18	8	5	127.4	140.4

Table 3.3 Impacts of Land Acquisition by Village

Project	Village	HH (No.)	Person (No.)	Total Land Area (mu)	Land Area (mu) per HH	Area of Land to Be Acquired (mu)	Land Area (mu) Per Capita before Acquisition	Land Area (mu) Per Capita After Acquisition	% of Land Loss
Permanent Land Acquisition									
Sihe CBM Fired Power Plant	Qinzhuang	177	567	1,418	8.01	42.00	2.50	2.43	2.96
	Yinzhuang	264	890	979	3.71	25.35	1.10	1.07	2.59
	Liuzhuang	308	986	2,169	7.04	12.45	2.20	2.19	0.57
	Subtotal	749	2,443	4,566	6.10	79.80	1.87	1.84	1.75
Land Lease (20 Years)									
Panzhuang CBM Surface Extraction	Lizhuang	270	1,030	2,510	9.30	140.40	2.44	2.30	5.59
Total		1,019	3,473	7,076	6.94	300.00	2.04	1.95	4.24

Table 3.4 Impacts of Land Acquisition on Income by Village

Project	Village	HH (No.)	Person (No.)	Average Income Per Capita Before Acquisition (RMB)	Average Income after Acquisition (RMB)	Projection of Average Income Per Capita (RMB)		
						2005	2006	2007
Permanent Land Acquisition								
Sihe CBM Fired Power Plant	Qinzhuang	177	567	2,600	2,543	3,193	3,513	3,864
	Yinzhuang	264	890	3,000	2,954	3,404	3,676	3,970
	Liuzhuang	308	986	2,600	2,592	3,092	3,463	3,879
	Subtotal	749	2,443	2,746	2,713	3,229	3,552	3,909
Land Lease (20 Years)								
Panzhuang CBM Surface	Lizhuang	270	1,030	2,400	2,277	3,477	3,756	4,018

Extraction								
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4. LEGAL AND POLICY FRAMEWORK

There are two sets of regulatory and policy requirements that are applicable to the land acquisition and resettlement of the project: relevant Chinese laws and regulations at national and provincial levels, and ADB policies. These regulatory and policy requirements are summarized in the following sections.

4.1. Chinese Laws and Regulations

1) *Land Administration Law of PRC, 1998*

The *Land Administration Law of the People's Republic of PRC* was newly amended and brought into force on January 1, 1999. It is stipulated in **Clause 2, Article 1** of the land administration law that the State can acquire collective-owned land according to the law for the sake of public interests. The law requires that agreement from two thirds of villagers or two thirds of the villagers' representatives be obtained before making adjustments to the land, and be verified by the agricultural administration department of the county or township government.

Article 47 stipulates that in case land acquisition shall take place, compensation shall be made in accordance with the original usage of the acquired land, which shall include a land compensation fee, a relocation subsidy and a compensation fee for the attachment of the land and standing crops. The land compensation fee for the acquired cultivated land is 6-10 times the average annual output value (AAOV) of the land in the previous three years before land acquisition. The relocation subsidy of acquired farmland shall be calculated according to the agricultural population to be resettled. The agricultural population to be resettled is computed with the quantity of acquired farmland divided by farmland quantity per person of the acquired unit. The relocation subsidy for the agricultural population to be resettled shall be 4-6 times the AAOV in the previous three years. But the relocation subsidy for farmland shall not exceed 15 times the AAOV. However, in special cases a higher relocation subsidy may be given to a maximum of 15 times the AAOV over the last three years. The provinces or municipalities directly under the central authority shall determine the standards of compensation for the attachment of the land and standing crops.

2) *Shanxi Management Guidelines for Implementation of the PRC Land Administration Law*

Article 27 of the Law stipulates that land acquisition units should pay the land compensation fees according to the following standards: i) The acquisition of basic farmland land (orchard land, fish pound, and lotus pound are regarded as basic farmland) should be compensated at 8 to 10 times of the AAOV of last three years before the acquisition; ii) Other farmland land than basic farmland appropriated should be

compensated at 6 to 9 times of the AAOV of last three years before the acquisition. . . ., and vi) Idle land, waste mountains, waste land, and waste alluvial land to be acquired should be compensated at 3 to 6 times of the AAOV of last three years of the whole village's farmland.

The relocation subsidy is stipulated in **Article 28**. It states that: i) The acquisition of basic farmland land (orchard land, fish pound, and lotus pound are regarded as basic farmland) should be compensated at 5 to 6 times of the AAOV of last three years before the acquisition; ii) Other farmland land than basic farmland appropriated should be compensated at 4 to 5 times of the AAOV of last three years before the acquisition. . . ., and vi) Homestead, idle land, waste mountains, waste land, and waste alluvial land to be acquired should not be compensated.

According to **Article 31**, the compensation for standing crops is based on the production value of one season's crops. Trees that can be replanted are compensated as replanting fees and young tree loss fees. Trees that can not be replanted are compensated according to related regulations.

4.2 ADB's Involuntary Resettlement Policy

The Asian Development Bank sets out its official requirements in the Involuntary Resettlement Policy adopted in 1995. The Bank's policy on involuntary resettlement is Resettlement Policy adopted in 1995. The Bank's policy on involuntary resettlement is aimed to: (i) avoid involuntary resettlement wherever feasible; and (ii) minimize resettlement where population displacement is unavoidable, and ensure that displaced people receive assistance, preferably under the project, so that they would be at least as well-off as they would have been in the absence of the project. Appropriate land, housing, infrastructure, and other compensation, comparable to the without project situation, should be provided to the adversely affected population, including indigenous groups, ethnic minorities, and pastoralists who may have usufruct or customary rights to the land or other resources taken for the project.

According to the Bank policy, the contents and level of detail of a resettlement plan, which may vary with circumstances, especially the magnitude of resettlement, should normally include a statement of objectives, policies and strategy, and should cover the following essential elements: (i) organizational responsibilities; (ii) community participation and integration with host population; (iii) socioeconomic survey; (iv) legal framework, including mechanisms for resolution of conflicts and appeals procedures; (v) identification of alternative sites and selection; (vi) valuation of and compensation for lost assets; (vii) land ownership, tenure, acquisition and transfer; (viii) access to training, employment and credit; (ix) shelter, infrastructure and social services; (x) environmental protection and management; and (xi) implementation schedule, monitoring and evaluation.

The Bank policy also requires that cost estimates should be prepared for these activities; they should be budgeted; and implementation of the activities should be scheduled with time-bound actions in coordination with the civil works for the main investment project.

4.3 Objectives and Principles of Land Acquisition and Resettlement

Taken together, the principles of land acquisition and resettlement as well as the ADB requirements and procedures, the primary objectives of the RP are to restore the income and living standards of the affected persons (APs) within a short period of time after land acquisition and resettlement and with as little disruptions as possible in their own economic and social environment. Particular attention will be given to the needs of the poorest and vulnerable groups to be affected. The RP for this project has been prepared with these as the guiding principles. **Table 4.1** presents the main elements of the approach, which meets the ADB requirements as outlined in the Involuntary Resettlement Policy and ADB Handbook on Resettlement.

Table 4.1 LAR Principles and Approach

LAR Principles	Approaches
1. Land acquisition and involuntary resettlement should be avoided or minimised where feasible from an economic, engineering, social and environmental aspect.	Land acquisition and resettlement issues have been considered for project alternatives during project design stage, which could minimise land acquisition and resettlement.
2. Plans should be prepared for those displaced.	APs identified and their land, houses and other assets enumerated during project design, measurement survey and socio-economic survey conducted to assess impact and propose income rehabilitation plan.
3. APs should receive full compensation for all of losses, including assets and livelihoods regardless of land tenure status.	Cash compensation for land, houses, crops, trees and other assets in accordance with existing procedures; RP includes provisions for other assistance.
4. APs should be informed of and consulted on land acquisition resettlement and compensation options.	Meetings with APs, village leaders, and local governments were held; household interviews and socio-economic survey of APs were conducted. Information campaigns through the local media and meetings and through neighbourhood, village committees and resettlement offices to inform the APs will be carried out. This process will continue throughout the planning and implementation stages.
5. Land acquisition and resettlement should be an integral part of project design. No land acquisition will take place prior to the satisfactory relocation of APs.	Environment and land acquisition and resettlement aspects were considered as major factors for the selection of the project scheme, including the minimisation of land acquisition and house demolition. Project schedule will take into account land acquisition and resettlement timetables.
6. Land acquisition and resettlement program to be monitored by the Government and ADB.	An independent agency will be engaged, under terms of reference acceptable to ADB, to monitor the land acquisition and resettlement plan and to report on it to the Government and ADB.

4.4 Entitlement and Compensation

4.4.1 Principles of Compensation

In accordance with the legal and policy requirements of the Chinese Government and the Asian Development Bank, the principles of the compensation and entitlements established for the project are as follows:

- Compensation and entitlements provided to APs are adequate to at least maintain their pre-project standard of living, with the prospect of improvement;
- Land temporarily occupied and the period of disruption are kept to a minimum;
- All APs, legal and illegal, are taken into consideration and accounted for;
- After land acquisition, the average land holding per capita should be sufficient to maintain their living standard;
- Where land allocation per capital is not sufficient to maintain previous livelihood standards, other income generating activities are provided for;
- All APs are adequately informed on eligibility, compensation rates and standards, livelihood and income restoration plans, and project timing.
- No land acquisition will take place prior to satisfactory compensation and resettlement of the APs.
- The resettlement cost should be included as part of the Project costs.

4.4.2 Definition of APs and Compensation Eligibility

Affected persons (APs) refer to all persons whose livelihood or living standard is adversely affected through the loss of land, other assets, income as a consequence of the CBM Development and Utilization Project by the SJCMG. **Table 4.2** below summarises the types of people who are eligible for compensation and entitlements.

Table 4.2 Summary of Eligibility Criteria

Project Component	Eligibility
Sihe CMM Fired Power Plant	All of the people losing their land, orchard land, standing crops and trees within right-of-way (red line) by the Sihe CBM Fired Power Plant
Panzhuang CBM Surface Extraction	All affected people due to the land occupation by CBM wells, gas collection stations and pipelines within the planned 21 wells in Panzhuang

All APs losing land, standing crops or sources of income will be compensated or rehabilitated in accordance with the type and amount of their losses and they are included in the final Detailed Measurement Survey (DMS) to be completed within the deadline specified by the government, or are identified as affected temporarily during construction. The deadline specified by the government is set as the final date for compensation eligibility. APs cultivating land and increasing other productive assets after the deadline will not be eligible to compensation or subsidies.

4.4.3 Compensation Standards

The objectives of the compensation and entitlements standards are based on the principle to improve living standards of the local communities, including those who will lose their land, houses and other properties. Compensation equivalent to replacement value will be paid for all losses due to land acquisition and involuntary resettlement of the APs. In order to adequately compensate for the above categories of impacts and ensure proper relocation and economic rehabilitation of affected persons, the following entitlement policies and compensation standards have been formulated and used for the LAR of the Project.

Permanent Land Acquisition:

According to the PRC Land Administration Law, the compensation of land losses consists of land compensation, land relocation subsidy and standing crops compensation. Based on the *Shanxi Management Guideline of PRC Land Administration Law* and the permanent and temporary land acquisition policy of Qinshui County Land and Resources Bureau, SJCMG held a meeting on August 1, 2003 with the township and village leaders, and APs of the communities to be affected by the Project to discuss compensation standards of land acquisition, and compensation standards for standing crops and trees and so on. Based on the results of the meeting, the following compensation standards are finalized for the Project.

Permanent loss of agricultural land will be compensated in cash to the affected villages at a rate equivalent to 9 times the AAOV. Compensation will be paid to village committee/township to develop livelihood alternatives for the APs. Individuals or entities legally and illegally using affected plots will be compensated in terms of "land for land" mechanisms through redistribution of land within the village territory or other means.

All APs affected by permanent agricultural land losses will be entitled to receive a land relocation allowance equivalent to 6 times the AAOV. The compensation will be paid to the village committee and township government.

The loss of standing crops and trees will be compensated in cash to the APs at a rate equivalent to one (1) times the AAOV.

Combined together, they are equal to 16 times the AAOV. The standards of compensation are presented in **Table 4.3**.

Table 4.3 Compensation Rate of Permanent Agricultural Land Acquisition

Type of Land	Output (kg/mu)	Unit Price (yuan/kg)	Compensation Factor (x AAOV)			Total (RMB/mu)
			Land	Relocation Allowance	Standing Crops	
Dryland	500	1	9	6	1	8,000
Irrigated land	1,000	1	9	6	1	16,000

However, the current land acquisition procedure should follow the “*Notification for Strict Implementation of Commercialized Land Use Rights Transfer through Open Bidding*” issued by the Ministry of State Land and Resources and Ministry of Inspection on August 26, 2002. The notification points out that the commercialized land use right transfer must go through open bidding process, the supply plan for other types of land has been publicized, if the same land has over two land users to use the land, it also should go through open bidding for land transfer. Now for this project land acquisition, TianYuan Real Estate Evaluation Consulting Co., Ltd of Jincheng City has done the land evaluation and given “The Land Price Estimation Technology Report”. The land price of this project is RMB 78,000 per mu, including land compensation, relocation allowance, standing crops, land acquisition management fee, land use tax, land rehabilitation fee, new construction land use fee, land development fee, investment interest, investment benefit, land value-addition income, etc. So the land acquisition cost of the project is RMB 78,000 per mu.

It should be noted that land compensation and relocation subsidy funds will be used by local governments to develop the productive capacity of the remaining land in their jurisdiction and/or develop other economic activities. The measures will include: (1) re-allocation of land in the village/township; (2) development of new land; and (3) establishment and expansion of existing enterprises by the township governments to create jobs for the APs.

Land Lease:

Compensation rates for land lease of the Project are provided in **Table 4.4**. The contract of the land lease will be signed on a two-year basis and is expected to be renewed every two years for up to 20 years. Cash compensation for land lease will be paid to APs. This will be a benefit to APs, who can use the compensation funds for other income generation activities. The consultation results indicate that the APs welcome the land lease. The compensation will be paid to the APs directly, including the compensation for crops.

Table 4.4 Compensation Rate for Land Lease

Type of Land	Land Compensation (RMB/mu/yr)	Land Lease (RMB/mu/yr)	Land Administration Fee (RMB)	Land Rehabilitation Fee ¹ (RMB/mu)	Total (RMB/mu)
Farmland	1,000	1,640.1	30	6,667	9,337.1
Waste land ²	1,000	1,640.1	30	1,500	4,170.1

Note: ¹ One time payment of land rehabilitation fee must be made during the land application and approval. After that no charge will be applied.

² The land compensation for farmland and wasteland leasing is the same rate is due to the fact that the SJCMG considers the APs should be compensated at their maximum satisfaction and the possibility of the wasteland to be developed into farmland, therefore, the same price will apply to the acquisition of different land.

At the end of the land lease, SJCMG will be responsible to restore the productive capacity before returning the land to the APs. The affected persons can then resume their agricultural production.

4.5 Special Considerations

During the design and implementation of the LAR program, incorporation of the needs and interests of women, elderly and children will be ensured. Special attention will be given to the potential difficulties faced by low-income families in the affected communities during land acquisition planning and implementation. Focused consultation and participation programs will be carried out. When there are adverse impacts on women, elderly and children, and poor families, additional social assistance will be provided.

Based on the results of socio-economic survey, there are no vulnerable people identified in the Project-affected areas (see Section 2.4). However, if there is any vulnerable household identified during the land acquisition process, SJCMG will provide RMB 5,000 per household for income-generation activities. The fund will come from SJCMG's annual financial contribution fund to the poverty reduction.

4.6 Entitlements Matrix

From the site survey by the SJCMG, the major impacts of land acquisition have been identified based on the nature of losses; an entitlement matrix has been prepared as a guide to compensation payments. The matrix is presented in **Table 4.5**.

Table 4.5 Entitlement Matrix

Type of Losses	Level of Impact	Entitled Persons	Compensation Policy and Standards	Implementation Issues
<p>Permanent land loss (<i>No illegal APs</i>) (23 households or 85 persons)</p>	<p>Permanent loss of agricultural land and crops. 79.8 mu (5.32 ha) of land in total for the Project</p>	<p>All users with or without legal papers including AP settled on the land after 29/08/98 (Land Law) as long as they are included in the final AP list or are able to prove their occupation of affected plots before the cut-off date. The cut-off date is the date of the socio-economic survey in project area, i.e. by the end of August 2003</p> <p>All users (including encroachers) shall receive compensation for loss of standing crops, and trees only</p> <p>Land compensation and resettlement subsidy will be paid to the village committees/ township governments</p>	<ul style="list-style-type: none"> ● Cash compensation for loss of standing crops and trees at market prices and paid directly to APs. ● The compensation rates for land loss shall be around RMB 78,000 per mu, AND ● As a priority, provision of land with an area similar to that of the lost land and satisfaction to the AP, OR ● If the land lost is marginal, the AP have the option of receiving cash compensation at full replacement cost if they wish. 	
<p>Land Lease (7 households or 18 persons, and one collective)</p>	<p>Loss of use of land and crops during construction and operational period for 20 years at maximum. 140.4 mu (9.36 ha) in total for the Project</p>	<p>All users with or without legal papers including AP settled on the land after 29/08/98 (Land Law) as long as they are included in the final AP list or are able to prove their occupation of affected plots before the cut-off date. The cut-off date is the date of conclusion of the socio-economic survey in project area, i.e. by the end of August 2003</p> <p>All users (including encroachers) shall receive compensation for loss of standing crops only</p> <p>Compensation for land lease will be paid to the APs, The land lease will be renewed every two years.</p>	<ul style="list-style-type: none"> ● Cash compensation for loss of standing crops and trees at market price, AND ● Restoration of land to its previous or higher quality when land is returned after 20 years lease at maximum. 	<p>Measures shall be taken to improve land quality in cases of land quality being adversely affected. Mainly keeping the surface rich soil and levelling and modifying the land by the user of the land when they are returned.</p>

4.7 Gaps Between ADB and Chinese Policies

According to the Chinese regulations, no entitlement is considered for illegal land developers, and farmers with one-year land use contracts, whereas the ADB policy requires the above APs to be compensated the same way as the regular APs.

No illegal APs have been found from the census and socio-economic surveys as well as land tenants or sharecroppers. The provisions are simply discussed in case this arises. If any is discovered during the implementation of land acquisition, the SJCMG will follow the ADB policy in this regard. It is agreed that all APs, legal and illegal, are taken into consideration and accounted for. Therefore, APs without legal title will directly receive full compensation as the regular APs. Farmers with short-term land use contracts and labours will be guaranteed a rental contract equal to the remaining years of their previous contract and contract terms will be equivalent to those of the old contract.

Chinese regulations require giving all APs the same treatment without gender consideration. However, the ADB policy requires giving special consideration to women, female-headed households and other venerable groups. The SJCMG has followed the policy of the Bank and has incorporated the issues of vulnerable groups and gender equity into the resettlement planning and implementation.

5. RESETTLEMENT AND INCOME RESTORATION PLAN

The ultimate objective of the RP is to improve the living conditions of the affected households and host communities. Given the fact that the permanent loss of land to the Project will reduce the availability of the resources to the rural communities who depend largely on land for their livelihood, the achievement of the better-off objective will necessitate the establishment of income restoration programs that will offer the APs.

All of households to be affected by the land acquisition are farmers. The purpose of this section is to identify and assess possible options available for the income restoration program.

5.1 Livelihood Rehabilitation Plan

It is stipulated in the Land Administration Law of the PRC of 1998 that all levels of local governments shall support the affected rural collective economic enterprises and individual farmers to establish and operate new enterprises. To this effect, the local governments will make use of the compensation for acquired land to expand employment opportunities in the affected communities, along with a host of other measures such as increased agricultural production, employment of APs in project activities, social assistance to the most vulnerable groups.

On the basis of the Law and the wishes of the APs, SJCMG will provide short-term and

long-term employment and training opportunities to the affected people as first priority during construction and operational phases, respectively. According to estimates, the project will provide 424 person-months of skilled labour and 70 person-months unskilled labour positions during the construction phase and some full-time skilled and unskilled labour positions during the operational phase. The affected people will be given first priority to be employed in the Project as workers, safety guards, cleaners and so on, if they wish. On average, they can make about RMB 300 to RMB 1,000 of salary per month. Their income will be increased substantially.

5.2 Land Re-Adjustment and Agricultural Extension

For those who would like to choose land re-adjustment, the local governments will adjust the allocation of land to the APs through re-allocation within the village. The land use before and after land acquisition was presented in **Table 3.3**. In addition, the local governments will design and undertake programs to intensify and diversify farm operations for the APs in order to raise the value of production and income per unit of land. Idle land will be brought into production through land development and irrigation.

According to consultations with local government agencies, the introduction of new crops and new farming techniques and technologies will be promoted to farmers in the affected communities. The departments of agriculture and science & technology will be mobilized to carry out this task. Specific measures being considered include construction of introduction of high-quality agricultural products, high-yielding crops, use of plastic films and green houses, more efficient application of fertilizers, and so on. Agricultural technicians and cadres will be dispatched to the affected villages and farmer households to provide workshops and hands-on training.

5.3 Training Provisions

All of the affected APs will be given top priority in the distribution of project employment opportunities and training if they wish so. The training will be delivered to all APs who would like to attend in their villages by the technical people from relevant organizations. Training programs are offered quarterly and include such subjects as technology on animal husbandry by animal husbandry department; economic crops planting and technology on planting fruits and vegetables in greenhouses during the winter by agricultural department; electronics; machinery and pipeline maintenance and repair; equipment maintenance and repair of gas compression stations; sales methods and strategy; vehicle maintenance and repair by SJCMG. The SJCMG will cover all of the training costs. About 1% of the resettlement cost is budgeted to cover the training cost.

5.4 Employment of APs in Local TVEs

On the basis of consultations with local governments, major portions of the land compensation funds and the relocation subsidy will be injected into the expansion and

creation of local township and village enterprises (TVEs). While the growth of local village industries will benefit the affected communities as a whole, special attention will be paid to the employment of the APs if they so choose. The local governments will also consider financial incentives in the form of tax reductions and subsidies to those enterprises that wish to participate in the employment promotion program for the APs.

5.5 Gender Considerations

In the affected areas, women play a very active role in the economic development activities as well as household work. Apart from family responsibilities, women are playing an active role in the agricultural production process, both on farm and non-agricultural activities. Based on the survey of APs, the participation rate for women is 30% as farmers, 40% as others. In addition, women in affected areas earned large proportion of family income. If without consideration of unpaid household work, women contribute more labour than male counterpart. Women will need special attention and support to maintain their sources of livelihood and traditional production pattern.

SJCMG and the local government will pay special attention and support to women, concerning their household needs, particularly women-headed households, and maintain their sources of livelihood and traditional production pattern. Women will be given priority for the employment opportunities generated from the Project construction and operation. It is proposed that RMB 5,000 will be provided to each women-headed household. However, the survey indicates that no women-headed households have been found in the Project areas. However, if there is any, the policy will be applied. In addition, special economic support (such as tax exemption, low interest loan and subsidy) should be provided to affected women for developing businesses.

6. PUBLIC INFORMATION, CONSULTATION AND PARTICIPATION

The public consultation is carried out during the project design and planning phase by the The CBM Office and Power Plant Preparation Office of SJCMG, particularly through the following activities:

- Interviews with affected households;
- Socioeconomic surveys of affected households from August 1 to August 10, 2002;
- Village meetings held on August 1, 2002;
- ADB PPTA Resettlement Specialist and technical staff of the Project had an informal discussion with the village leaders and selected APs from August 1 and August 2, 2002;
- Measurement surveys conducted in July and August of 2002;
- Meetings with various stakeholders held between March and August, 2002

Further consultation about the revised RP Report with the APs has been done. The meetings were arranged by the Land Office of SJCMG in association with village

committees.

Survey results show that 90% of local residents support this project; 80% believe that the project will benefit them; 20% have no opinion; 3.3% knew this project 5 years ago; 96.7% knew it half a year ago. All the affected people knew this project at the time of surveys. Based on the results of consultations with the village committees and the households, the major issues raised by APs include: i) fair compensation; ii) compensation should be based on related laws and regulations; iii) minimization of the land acquisition if possible; and iv) insurance of living standard recovery.

The *Land Administration Law* requires the disclosure and consultation with the APs (Articles 48 and 49). The APs have been notified about the key elements of the land acquisition plan on village meetings and interviews in August, 2003 and have participated in the planning and design of the land acquisition program. For example, during the measurement survey and the socio-economic survey of APs in August, 2003, and a number of meetings and interviews to discuss key elements of the land acquisition program have been convened in affected villages. Results of these consultations were integrated into the RP.

A land acquisition information booklet has been prepared and distributed to the APs in September, 2003. In addition, the RP will be available to anyone at the villages wishing to consult. Copies of the RP in Chinese will also be made available in the township and village committees while copies in English will be submitted to ADB.

The revised Land Acquisition Information Booklet has been disclosed at the end of August and the beginning of September 2004.

Further consultation with the APs will continue so that all issues may be addressed prior to the start of the Project construction and implementation of the RP. The meetings will be arranged by the Land Office of SJCMG in association with village committees. Each affected household will have the opportunity to negotiate on a valuation contract.

The public participation and consultation process is shown in **Table 6.1**.

Table 6.1 Public Participation and Consultation Process

Purpose of Event	Form of Event	Timing	Implementing Agencies	Target Participants	Remarks
1. Provide briefings to APs on Project & LA. Solicit comments from APs.	Public meetings	Sept. 2003	SJCMG, township government, and village committees	All APs	<ul style="list-style-type: none"> ● Meetings were held in each village
2. Disclosure of RP Booklet	Public & community meetings and focus group discussion	Sept. 2003	SJCMG, township land administration office, and village committees	All APs affected by land acquisition of the Project	<ul style="list-style-type: none"> ● Distribution of the RP booklet to APs to discuss concerns to RP ● Discussions with various focus groups to solicit comments & suggestions
3. Present draft final RP to APs	Public & community meetings and focus group discussion	Mar. 2003	SJCMG, township government, and village committees	All APs	<ul style="list-style-type: none"> ● Distribution of the draft LA Plan to APs to discuss concerns & gaps relating to RP ● Discussions with various focus groups to solicit comments & suggestions
4. Conduct final detailed census survey	Site investigations and household interviews	Nov. 2004	SJCMG, township land administration office, and village committees	All APs affected by land acquisition of the Project	<ul style="list-style-type: none"> ● Inventory of all assets and land holdings ● Collection of socio-economic data
5. Inform beneficiaries of project progress, final design, and timing	Community meetings and focus group discussion	Ongoing	SJCMG, township government, and village committees	Stakeholders, beneficiaries, and APs	<ul style="list-style-type: none"> ● Meetings to be held with beneficiary population, and with APs
6. Advise APs of entitlements and dates of disbursement	Public meetings	Sept... 2004	SJCMG, township government, and village committees	All Aps	<ul style="list-style-type: none"> ● Village meetings to outline entitlements
7. Disclosure of the revised RP Booklet	Public meetings	Sept.2004	SJCMG, and village committees	All Aps	<ul style="list-style-type: none"> ●
8. Monitoring of APs, beneficiaries and health impacts.	Household interviews	Post land acquisition (Dec 2004 – Dec. 2006)	SJCMG, township government, and village committees, independent external monitor	Random sample surveys for 30% of affected households	<ul style="list-style-type: none"> ● Identify need for additional support, particularly for vulnerable and disadvantaged group ● Provide recommendations and update LA Plan monitoring plan ● Identify health improvements

A major issue in land acquisition implementation and management is the appropriate institutional framework for both the executing agency and field levels. It is important to ensure timely establishment and effective functioning of appropriate organisations mandated to plan and implement land acquisition, compensation, income restoration and livelihood programs.

7. INSTITUTIONAL ARRANGEMENTS

A major issue in land acquisition implementation and management is the appropriate

institutional framework. It is important to ensure timely establishment and effective functioning of appropriate organisations mandated to plan and implement land acquisition, compensation, income restoration and livelihood programs. For a successful implementation of the LA Plan, an institutional framework has been developed. The respective responsibilities of the SJCMG and other relevant organizations are developed and summarized in **Table 7.1**.

Table 7.1 Institutional Responsibility Matrix

Institution	Responsibility
SJCMG	<ol style="list-style-type: none"> 1) Coordinating construction and LA Plan, including: contracting the relevant design Institutes to determine the boundary of construction according to Project design, applying to Municipal Planning Bureau for land-use permit, and applying to State Land and Resource Administration Bureau for construction land use permit 2) Conducting measurement survey of land acquisition within the construction boundary 3) Negotiating and signing LA contracts 4) Disbursing compensation funds 5) Conducting internal monitoring on the progress of LA Plan 6) Supervising the implementation of the LA Plan 7) Review monitoring reports and adopt corrective measures if necessary 8) Disburse funds for LA to APs and village committees/township 9) Inspect land use conditions after LA
Jincheng Planning Bureau	<ol style="list-style-type: none"> 1) Review the application from SJCMG for land use permit and preliminary approval document 2) Verify the boundary of land and property acquisition 3) Issue “planned land use permit” 4) Inform the SJCMG and Qinshui County State Land and Resource Administration Bureau
Land and Resources Bureau of Jincheng City and Qinshui County	<ol style="list-style-type: none"> 1) Issue “construction land use permit”, in accordance with the land use application of the SJCMG and the “planned land use permit” issued by Jincheng Planning Bureau 2) Supervise the implementation of the LA Plan for compliance with approved plan and approval documents 3) Handle complaints and grievances from APs 4) Disbursing land acquisition fund to APs/ village committee/township 5) Negotiating compensation amount and signing LA contracts with SJCMG
Jiafeng Township Government/Village Committees	<ol style="list-style-type: none"> 1) Conduct detailed survey 2) Negotiate compensation amounts and sign LA compensation agreements with SJCMG for land loss 3) Reassign collective agricultural land to APs 4) Provide income restoration and livelihood rehabilitation programs to APs 5) Provide necessary assistance to APs during land acquisition process 6) Provide arrangements with local enterprises for job seekers 7) Ensure that APs receive adequate training 8) Carry out the internal monitoring of LA Plan implementation 9) Handle/resolve grievances
Land Acquisition Leading Group	<ol style="list-style-type: none"> 1) Supervise and monitor the implementation of RP 2) Review internal monitoring reports 3) Review summary reports and independent reports prepared by relevant institutions 4) Propose corrective actions if problems are discovered in reviewing the progress reports and supervising implementation 5) Handle/resolve grievances 6) Review external monitoring reports prepared by the independent monitoring agency 7) Propose mitigation measures for any gaps in the RP to ensure that the objectives of the LA Plan will be achieved

In order to ensure that the staff of SJCMG and township/village committees can properly and smoothly handle the land acquisition, training programs will be organized. During implementation, the officers in SJCMG will regularly interact with the various local governments and other agencies, identify problems early and bring them to the attention of the Land Acquisition Leading Group.

One of the major responsibilities of the land acquisition office staff is to conduct internal monitoring of the LA program. The staff of the land office of SJCMG and township/village committees will be provided with special training in project monitoring before the initiation of field activities related to land acquisition.

8. GRIEVANCE PROCEDURES

SJCMG will make every effort to reach an agreement with each affected household on the land compensation on the basis of the policy and compensation principles mentioned in Section 3.0 above. To ensure that the affected people have avenues for redressing their grievances in the event that some issues occurred related to any aspect of land acquisition, detailed procedures have been established for the Project. The grievance procedures can be as follows:

- i) Affected people can appeal to the village committees;
- ii) If the village committee cannot solve the issue, it is taken to any of the following:
 - Shanxi Jincheng Coal Mining Group Co., Ltd. (SJCMG)
 - Jiafeng Township Government
 - Qinshui County Land & Resources Bureau/Jiafeng Township Land Administration Office
- iii) Reply should be made by the above agencies on the appeal within 15 days;
- iv) If AP is not satisfied with response or if the complaint is of a serious nature, then the appeal is taken to the Qinshui County Land & Resources Bureau;
- v) Reply should be made by the Qinshui County Land & Resources Bureau on the appeal within 30 days;
- vi) If the AP is still not satisfied with the response then they have the legal right to submit the appeal to the court.

9. RESETTLEMENT BUDGET

9.1 Costs and Budget

The costs to of land acquisition and resettlement are included in the overall budget of the

Project. The total costs are estimated to be RMB 9.9488 million at the prices of August 2003, of which RMB 6.2244 million for permanent land acquisition of the Sihe CMM Fired Power Plant and RMB 1.7688 million for the land lease (initial 4 years only) of the Panzhuang CBM Surface Extraction, and RMB 1.2218 million for other costs and contingency. All of the budget will be used for the first half year of the civil work construction. The detailed cost estimates are presented in **Table 9.1**.

Table 9.1 Detailed Cost Estimate of Land Acquisition

Compensation		Quantity	Unit	Unit Price/mu	Total (RMB10,000)	
1. Sihe CMM Fired Power Plant						
Permanent Acquisition	Land	Qinzhuang	42.00	mu	78,000	327.60
		Yinzhuang	25.35	mu	78,000	197.73
		Liuzhuang	12.45	mu	78,000	97.11
		Subtotal	79.80	mu		622.44
		Standing Crops				
2. Panzhuang CBM Surface Extraction						
Land Lease (first 4 years only)		Farmers	13.00	mu	17,287	22.47
		Collective	127.40	mu	12,120	154.41
		Subtotal	140.40	mu		176.88
Subtotal					799.32	
Others		Administration				24.46
		Training				24.46
		Monitoring & evaluation				24.46
Subtotal					73.38	
Contingency		Physical				87.27
		Price				34.91
Subtotal					122.18	
TOTAL					994.88	

Note: ¹The bidding price for land is estimated at RMB 78,000 per mu per agricultural land. The same price applies to all types of land.

²Compensation for standing crops is included in the rates for permanent land acquisition and land lease.

³The above budget includes the costs of land tax and land administration fee.

⁴The cost of land lease is calculated for the first 4 years, covering the period of the Project demonstration as it is uncertain how long the lease will go, but compensation will be paid for each year. The cost of the lease for 20 years would be RMB 770,000 for farmers and RMB 6.96 million for the collective.

⁵No vulnerable group has been identified from the surveys. Based on the results of socio-economic survey, there are no vulnerable people identified in the Project affected areas. However, if any vulnerable household is identified during the land acquisition process, SJCMG will provide RMB 5,000 per household in cash to assist them for income generation activities. The fund will come from SJCMG's annual financial contribution to the poverty reduction (each year SJCMG contributes several ten million on the poverty reduction programs).

9.2 Flow of Funds

SJCMG will be responsible for the financing of land acquisition cost under the Project. In accordance with the compensation policies and rates given in this LA Plan, SJCMG will sign compensation agreements with the following recipients and disburse the payments:

- Jiafeng township government/village committees of Qinzhuang, Yinzhuang,

Liuzhuang and Lizhuang for: a) the losses of farmland land and non-farmland by permanent land acquisition; b) the losses of farmland and non-farmland by land lease.

- APs for Compensation of standing crops and trees;
- Jiafeng Township Land Administration Office for land tax and land administration fee.

An external and independent auditor will audit the disbursement of land acquisition fund.

9.3 Administrative Costs

The ADB-fund Office of SJCMG will be budgeted 1% of the total amount of compensation payable for the implementation of land acquisition.

9.4 Contingencies

The cost estimates for land acquisition implementation include provision of contingencies, both price and physical (10%).

SJCMG is responsible for provision of adequate funds to carry out the implementation of the RP. Cost over-runs, if any, in the case of LA Plan implementation will be incurred by SJCMG.

10. SUPERVISION AND EVALUATION

10.1 Monitoring, Evaluation Objectives and Requirements

The objectives of monitoring and evaluation are to assess if the LA Plan is implemented on schedule and within budget and if the goals and principles of the LA Plan are achieved. Monitoring and evaluation will include, but not be limited to: (1) monitor the progress and effectiveness of LA Plan implementation; (2) ensure that the standard of living of APs are restored or improved; (3) assess if rehabilitation measures and compensation are sufficient; (4) identify problems or potential problems; and (5) identify methods of responding immediately to mitigate problems.

A monitoring and evaluation program will, accordingly, be implemented to (i) record and assess project inputs and the number of persons affected and compensated; and (ii) confirm that former subsistence levels and living standards are being re-restored and re-habilitated. Specifically, monitoring and evaluation will focus on the following aspects of the APs' situation and land acquisition process: i) land acquisition and transfer procedures; ii) compensation payments; iii) economic situation prior to and after land acquisition /use; iv) restoration or rehabilitation of income levels. Monitoring and evaluation should include establishment of socio-economic background data of the APs by 30% APs'

socio-economic survey prior to actual land acquisition and regular monitoring of their situation for a period of 2 years after land acquisition. In addition, qualitative and quantitative evaluation will be made on the sustainability of at least the pre-project standard of living of the APs.

10.2 M&E Indicators and Mechanisms

In order to ensure that the implementation of the land acquisition plan in accordance with the requirements, monitoring of implementation, both “internal” and “external”, will be carried out during and after the implementation of the Project. For internal monitoring, the Land Office of the SJCMG, will take full responsibility for conducting regular internal monitoring of the LA Plan. For external monitoring and evaluation, a qualified and independent monitoring agency will be engaged by the SJCMG to undertake supervision, monitoring and evaluation of land acquisition and livelihood and income rehabilitation from the project beginning to completion.

10.2.1 Internal Monitoring

During the RP implementation, the Land Office of SJCMG will collect and record the information of land acquisition activities. In the overall internal monitoring framework, there will be continuous information circulation from the village level to the SJCMG and periodic supervision and verification by the SJCMG. The internal monitoring for the implementation of the RP will be undertaken every six weeks and this will continue till the end of the Project construction. The main monitoring indicators are as follows:

- Payment of compensation fees in the various categories on a timely basis;
- Planning and implementation of income and livelihood restoration measures by the Land Office of SJCMG. Monitoring of investments made by villages and groups will also be carried out.
- Restoration of production activities.
- Restoration of temporarily used land to pre-existing condition.
- Recording the complaints.
- Inspection of the complaints register and actions taken for resolution of conflicts.
- Assessment of progress on income restoration and maintaining pre-project standards of living.

10.2.2 External Monitoring

SJCMG will engage Shanxi Academy of Social Sciences to undertake resettlement monitoring and evaluation for the Project. SASS will prepare an independent monitoring report every six (6) months during resettlement implementation and every year once resettlement has been completed. All reports will be submitted to SJCMG and the ADB at the same time. SASS will also provide training in best resettlement practices to the

resettlement staff at different levels.

The information for monitoring and evaluation will be checked from three sources: 1) the SJCMG; 2) township governments/street committees; and 3) the affected persons.

Data and information will be gathered through:

- Questionnaires surveys (30% of the affected households).
- Interviews with affected households and businesses/enterprises.
- Specific focus group interviews aimed at identifying the specific problems/issues related to groups such as the elderly, women, poor, persons affected due to land acquisition and resettlement.

Data and information collected will be analysed for affected areas, timing of impacts, types of impacts, levels of compensation, duration of the resettlement process, etc.

Table 10.1 summarizes a range of monitoring and evaluation indicators established to ensure attainment of objectives of land acquisition.

Table 10.1 Monitoring and Evaluation Indicators

Type	Indicator	Examples of Variables
Process Indicator	Staffing	<ul style="list-style-type: none"> ● Number of SJCMG staff on Project, by component and job function ● Number of other line agency officials available for tasks
	Consultation, Participation, and Grievance Resolution Procedures in Operation	<ul style="list-style-type: none"> ● Number of consultation and participation programs held with various stakeholders ● Grievances by type and resolution ● Speed of redress of grievances ● Number of field visits by SJCMG staff ● Effectiveness of compensation payment ● Coordination between SJCMG and other line agencies
Output Indicator	Acquisition of Land	<ul style="list-style-type: none"> ● Area of permanent land acquired ● Area of land lease required
	Standing Crops and Trees	<ul style="list-style-type: none"> ● Number and type of private trees acquired ● Standing crops destroyed by area, type and number of owners
	Compensation and Rehabilitation	<ul style="list-style-type: none"> ● Number of households affected (land, trees, crops) ● Number of private owners compensated by type of loss ● Number of collective owners compensated by type of loss ● Amount compensated by type and owner ● Number and amount of compensation paid ● Number of delivery of entitlements ● Number of use of entitlements by APs ● Amount of cultivated land re-allocation of cultivated land ● Type of agricultural technology and products introduced to the APs ● Number of job opportunities available to APs and number of APs employed in local enterprises ● Number of APs trained. ● Number of employed or unemployed
Impact Indicator	Household Earning Capacity	<ul style="list-style-type: none"> ● Employment status of economically active members ● Landholding size, area cultivated and production volume, by crop ● Changes to income-earning activities (off-farm): pre- and post land acquisition/land lease

During implementation of the land acquisition, internal monitoring will be undertaken every six (6) weeks. Post-land acquisition monitoring will be undertaken internally every three (3) months. The independent monitoring agency will undertake external monitoring every six (6) months. The information of monitoring will be checked from three sources: 1) the affected persons; 2) the village committees of Qin Zhuang, Yin Zhuang, Liu Zhuang and Lizhuang; 3) the Jiafeng Township Government; and 3) the Jiafeng Land Administration Office. The external monitoring agency will also carry out a comprehensive socio-economic survey after the completion of implementation to document the standards of living and the conditions of the APs after land acquisition. A monitoring report will be

prepared by the independent monitoring agency, including among other things: i) conclusion of evaluation; ii) major existing and potential problems; and iii) recommendations of mitigation or prevention measures.

The report of land acquisition monitoring in English will be forwarded to the Bank. SJCMG shall ensure that the monitoring agency includes information on the progress and status on all aspects of land acquisition activities. SJCMG will also submit a final report to the Bank, to be followed by a post-land acquisition impact evaluation by the monitoring agency, which should provide further evidence whether adverse effects of the Project have been mitigated adequately, and at least pre-land acquisition income have been restored.

11. IMPLEMENTATION SCHEDULE

Based on the time schedule of the Projects, a preliminary land acquisition compensation schedule reflecting the linkage between land acquisition tasks and civil works construction tasks shall be consistent with the time schedule of the Projects.

Land acquisition for both of the Sihe CMM Fired Power Plant and Panzhuang CBM Surface Extraction Projects will be completed one month before the start of the civil work construction in December 2004. All of the land acquisition activity will be completed within the first half year (November 2004 to April 2005) of the Project construction. **Table 11.1** provides the key activities and dates.

The proposed schedule is expected to ensure that all APs, prior to their actual relocation: i) will have been adequately consulted about the Project, its impacts and compensation entitlements; ii) will have received compensation entitlements in a timely manner; and iii) have been provided with means to establishing livelihood.

Table 11.1 Key LA Activities and Dates

No.	LA Activities	Dates of Deadline	Status
1.	Information booklet	September 17, 2003	Completed
2.	Resettlement plan	November 1, 2003	Completed
3.	RP placed on ADB/PRC websites	November 1, 2004	Planned
4.	Approval of RP	September 30 2004	Completed
5.	Detailed DMS	November 30 2004	Planned
6.	Agreements	November 30 2004	Planned
7.	Disclosure of the RP Booklet	September 2004	Completed
8.	Income rehabilitation plan	December 1 2004	Planned
9.	Training of APs	March 1 2005	Planned
10.	Training of staff	January 31 2005	Planned
11.	Set-up internal supervision	November 30, 2004	Planned
12.	Hiring external monitor	November 30, 2004	Planned
13.	Internal monitoring reports	January 31, 2005	1 st Report due
14.	External monitoring reports	April 30, 2005	1 st Report due
15.	Evaluation/completion reports	December 2005 & 2006	

Appendix 1

ADB CMM and CBM Production for Power Generation Project by Shanxi Jincheng Coal Mining Group Co., Ltd.

Summary Meeting Notes of Affected Village by Land Acquisition

- Time: August 1 & 2, 2003
- Place:
- (1) Qinzhuang Village Committee
Liu Futian (Chairman of Qinzhuang Village Committee), Zhang Liqiang (Villager Head), Zhang Liqi (Vice Head of Village), Zhang Qinning (Villager), Yan Shicai (Villager), Wang Wei (Villager), Shen Yingzhou (Villager), and Lu Tiancai (Villager).
 1. (2) Qinzhuang Village Committee
Shang Kaiming (Village Secretary), Shang Libing (Village Head), and Shang Ruankui (Villager)
 - (3) Liuzhuang Village Committee
Liu Hongfei (Chairman of Liuzhuang Village Committee), Li Baoyuan (Liuzhuang Villager), Liu Jianfu (Liuzhuang Villager), Wang Xiaoqian (Liuzhuang Villager), Zhang Taiping (Liuzhuang Villager), Liu Xiancheng (Liuzhuang Villager).
 - (4) Lizhuang Village Committee
Wang Fengming (CBM Office), Li Shengqi (CBM Office), Guo Mantang (Chairman of Lizhuang Village Committee), Yang Yanheng (Village Head), Yang Hanghang (Villager), Li Zhanglou (Villager), Huo Ruihua (Villager), Yang Kuanhong (Villager).
 - (5) The SJCMG, Qinshui County State Land and Resource Administration Bureau and Jia Feng township

In order to make the individuals, villages and township affected by the land acquisition due to the construction of the Sihe Coal Mine Methane-Fired Power Plant to be knowledgeable about the Project purposes, scope, compensation standards of land acquisition and method of payment, the Power Plant Preparation Office of SJCMG has conducted the village meetings in village committees of Qinzhuang, Yinzhuang, Liuzhuang and Lizhuang, with participation of the leaders of the village and the representatives of APs. Based on the in-depth discussion and negotiation, the requirements and suggestions from the representatives and reached agreement are documented in the following minutes of meeting:

1. The representatives wished that the land acquisition and compensations will follow the “Land Administration Law of the People’s Republic of China”, modified at the Fifth

Session of the Seventh Chinese People's Congress Standing Committee on December 29, 1998, and "Shanxi Management Guidelines for Implementation of the PRA Land Administration Law".

2. The representatives wished that the land acquisition compensation should be paid according to relevant laws, regulations, and procedures. The funds for payment should be ready.
3. The representatives wished that the SJCMG should take measures to minimize the impacts of the Projects on the project area, SJCMG agreed to execute the Projects according to the principle.
4. The representatives wished that APs will be given preference first to be employed by the Sihe Coal Mine Methane Fired Power Plant.

Power Plant Preparation Office of Shanxi Jincheng Coal Mining Group Co., Ltd.