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Financial risk analysis of Cambodia Kamchay hydropower BOT project

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In 1992, the Great Mekong sub-regional economic cooperation between China and ASEAN countries was officially launched and became a free economic zone. China began to implement a strategy of enterprises with investment from overseas. Since the beginning of 1993, the trade volume between China and Cambodia has increased year on year, Chinese enterprises have invested deeply in every field in Cambodia, and it has made an outstanding contribution to Cambodia's economic development and infrastructure construction. With the national strategic facilities construction for example, hydropower has been an area in which Chinese enterprises have invested heavily. China Electric Power Construction Corporation investment in the construction of the Cambodian hydropower station is in build-operate-transfer (BOT) mode for Chinese Cambodian investment. The first hydropower project, the hydropower project in Cambodia, also has the largest installed capacity and is the first use of BOT mode construction and operation. The prediction of some operational or investment risk may exist during the engineering project of Chinese enterprises based on BOT mode in Cambodia from financing to construction to operation to transfer, and to all levels of government and enterprises in the operation of the BOT project that provides valuable experience as the reference.

Introduction

Cambodia is located in the southern portion of the Indochina Peninsula in Southeast Asia. Its total land mass is 181,035 square kilometers (69,898 sq mi), it is bordered by Thailand to the northwest, Laos to the northeast, Vietnam to the east and the Gulf of Thailand to the southwest. The long-term war led to the destruction of a basic infrastructure and left a weak industrial base. Later, Great Mekong sub-regional economic cooperation has strengthened national economic links, improved regional competitiveness, promoted the common development of the region's economic and social environment, made economic cooperation have a more practical economic value and strategic significance, and provided valuable experience for reference for international enterprises that entered the region (Figures 1 and 2).

1. The project background

Kamchay hydropower station is located along the Kamchay River in Kampot Province in the southwest of Cambodia, about 150 km from the capital Phnom Penh. The project's total investment is US\$280 million, the total installed capacity is 19,300 kilowatts. The hydropower station is the work of China Electric Power Construction Corporation (formerly the China Hydropower Construction Group Company), the first overseas hydropower BOT investment mode project. The project is of great significance as it is the largest Chinese offshore BOT hydropower investment project. It was launched as a pioneer project, and is the key project of the China Electric Power Construction Corporation internationalization development strategy. From signing labor contract transformation capital operation mode of project operation, the innovation of enterprises is in line with international standards in the process of

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project management mode, so the group company leads the implementation of this project attaches great importance.

The BOT investment mode is a project that absorbs private capital for public utilities and infrastructure works. Because it eases pressure on government funding, using the experience of management and the operational efficiency of private capital and other advantages, it has been applied rapidly in practice. In Cambodia's economy where social wealth is extremely poor, China created the first successful precedents for foreign BOT investments.

The formal operation of the hydropower station marks Chinese first successful overseas investment of a hydropower station BOT project. It also marks for Cambodia an important symbol of a national strategic project being completed. However, of more importance is the power resources it provides which will promote the rapid development of a social economy in Cambodia. It has been built to play an active and important role to improve the power supply to Kampot Province, Takeo Province, Sihanouk Province and even the capital Phnom Penh. Instead of importing the power supply from neighboring areas it will be an independent supply and will improve the local people's production and living conditions. However, Cambodia's unsound economic policies, the backward social and economic level, and the uncertainty of the future international and social economic situation will bring different challenges and test the operation. The significance of the project in future is that it provides some measures to guard against possible risks.

2. The establishment of Kamchay hydropower project

After establishing Mekong sub-regional economic cooperation and with the ASEAN Free Trade Area officially launched, Cambodia took this opportunity to strengthen cooperation with China, and has expand economic and trade cooperation with all countries in recent years. But Cambodia has a serious shortage of a domestic power supply, restricting rapid development of the economy. The Cambodian power supply is mainly imported from neighboring countries; the cost is about three times higher than other the countries nearby. The high cost of power resources has made the economy sluggish as one disaster has followed another.

In 2003, the Cambodian Prime Minister Hun Sen said in a speech that: with the Great Mekong sub-regional economic cooperation opportunities, introducing foreign capital to develop local enterprises, and domestic natural resources, so we want to take this opportunity to promote our local economic development. Since there is a great shortage of power supply in Cambodia, this has restricted Kampuchea's economic development and the improvement of people's living standards; so Cambodia will plan to build a hydropower station to reduce electricity cost and also to attract foreign investors to invest in Cambodia.

In July 2004, Cambodia's Ministry of Industry, Mines and Energy began the bidding for the hydropower engineering international BOT project. Companies that participated in the bidding included the Chinese Hydropower International Company, China Electric Power Technology Import and Export Company, Guangxi Investment Group, Mitsui Corp of Japan, Canada Expert co. International, and many international well-known companies.

The final bidding was led by China's Electric Power Construction Group International Engineering Co. the company, China Hydropower Eight Bureau Co. Ltd and Northwest Hydropower Survey and Design Institute jointly won the first standard.

China Power International Company won the bid because of the following reasons: first, since 2003, both countries' relations had continued to develop, the leaders of the two countries had maintained a close relationship, and there had been increasing cooperation in various fields. Second, the company's total cost is the lowest, the price is very competitive; with the lowest operational phase price, with an average price of US\$8 cents which is equal to 1/3 of the import price. Finally, China Hydropower is China's largest, most powerful, most influential industry brand water conservancy and hydropower construction enterprise, with a leading level of science and technology expertise and much experience in construction and operation.

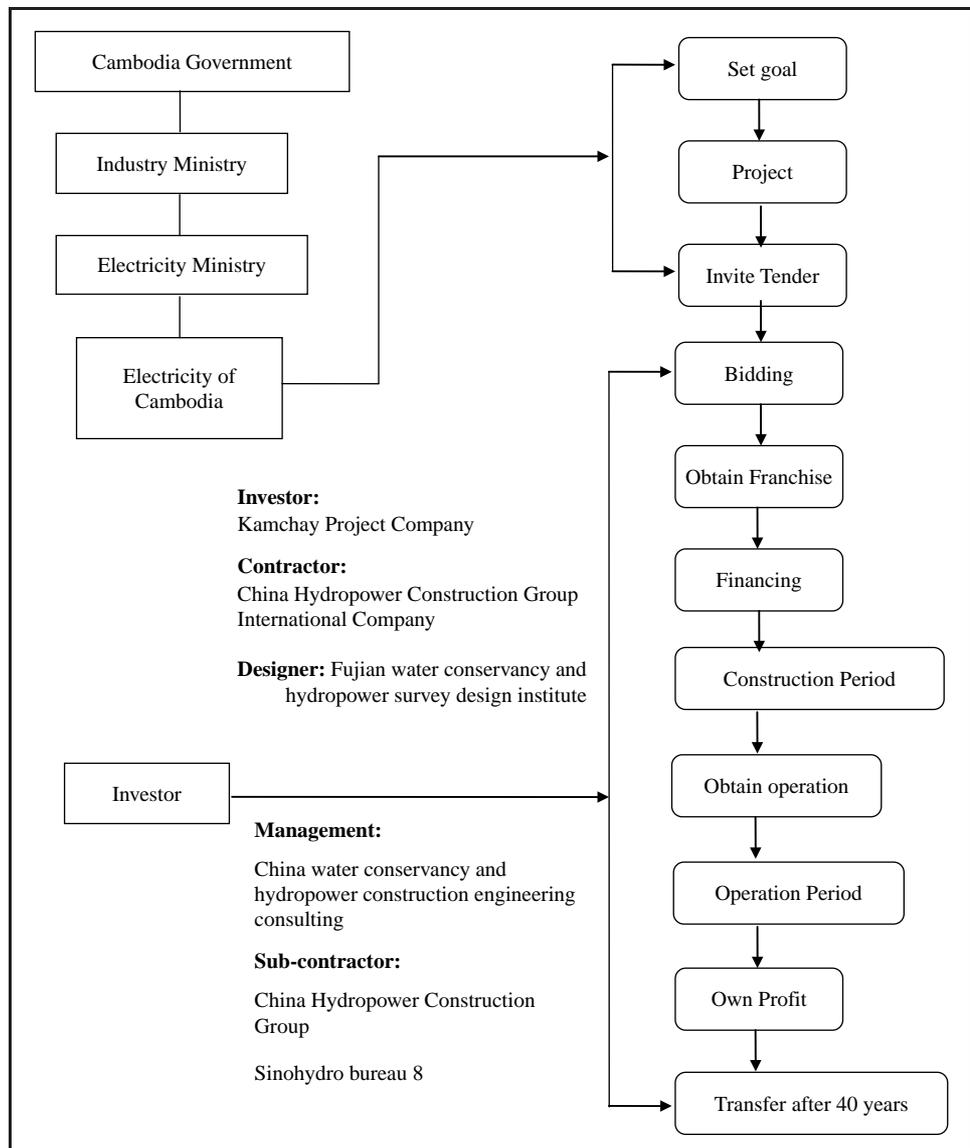
3. The development of Kamchay hydropower project

3.1 The basic situation of hydropower station construction project

The main organization of Kamchay and BOT project framework has invested by (Kamchay company), management (project management department, China Water Conservancy and hydropower engineering consulting North West Co), general contractor of Electric power company (China Hydropower Construction Group International Ltd (Fujian), design of water conservancy and Hydropower Survey and Design Institute, project department, project department of Northwest investigation design and research) and commissioned the construction side (China Hydropower Construction Group International Ltd Kamchay project department, China Water Conservancy and Hydropower Engineering Bureau eighth) (Figure 3).

3.1.1 *Decision-making stage.* According to the agreement, China Electric Power Construction Group International Engineering Company had an investment in the project of US\$280 million with BOT, with a one year project financial period, an operational period of 44 years (of which the construction period is four years, with 40 years for the

Figure 3 Project process



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commercial operation). The annual power generation is 498 million kilowatts with the average price of US\$8 cents, for civil engineering and installation of mechanical and electrical engineering eight hydropower Co. The construction cost of the project is US\$140 million.

On February 23, 2006, a hydropower station project BOT implementation protocol, power purchase agreement and land lease agreement was signed at a ceremony held in Phnom Penh. The Cambodian Deputy Prime Minister and Minister of Cabinet Affairs Sok An, Industry Minister Sui Sem, Finance Minister Keat Chun, Chinese ambassador in Cambodia Zhang Jinfeng, China Hydropower Construction Group Party committee secretary Liu Qitao, hydropower eight bureau of general manager of limited company forest construction, deputy general manager Huang Min attended the signing ceremony. The company applied for necessary approvals and permits from the relevant government authorities in China and Cambodia regarding the financing for the Kamchay Project after signing the IA, LA and PPA. So far the following governmental authorities have approved the investment and financing for the Kamchay Project:

- State-owned Assets Supervision and Administration Commission of China.
- National Development and Reform Commission of China.
- Ministry of Commerce of China.
- Economic and Commercial Counselor's Office, Embassy of the People's Republic of China in the Kingdom of Cambodia.
- State Administration of Foreign Exchange of China.

And the relevant approvals in Cambodia mainly includes:

- Registration of the Sinohydro Kamchay Hydroelectric Project Co, Ltd
- Investment approval.
- Import permits.
- Construction license.
- Environmental approval and waste disposal permits.
- Explosive materials procurement approval.
- Blasting approval.
- Water resources utilization approval.
- Government guarantee of payments.
- Certificates on the clearance of mines and unexploded objects at site.

On April 8, 2006, Prime Minister Wen Jiabao and Cambodian prime minister Hun Sen attended the Cambodia hydropower station inauguration ceremony in Phnom Penh, and they also attended the groundbreaking ceremony at Kamchay hydropower station. Cambodia's power supply situation changed with the beginning of a hydropower station and the electric power industry rewriting Cambodia's economic development.

3.1.2 Construction stage

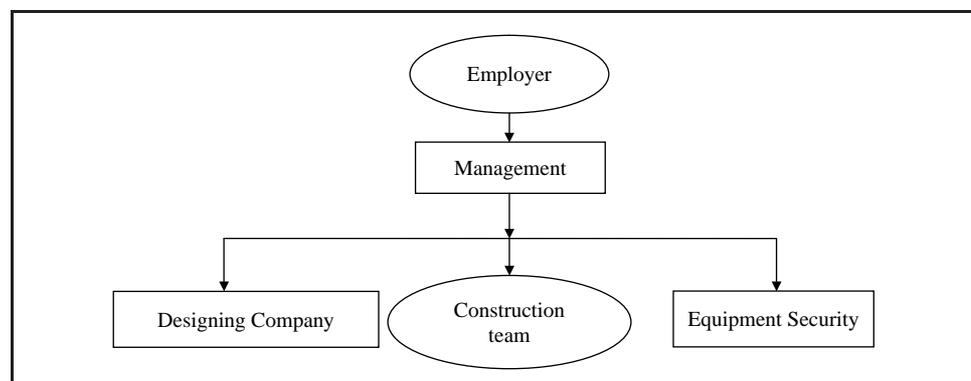
On September 2007, the project officially started the construction. The hydropower station design is a 114m roller compacted concrete gravity dam, on the right bank setting powerhouse, with a power station installed capacity of eight units, and a total installed capacity of 193,200 kilowatts, for a total period of 56 months. The project scale is large and complex, two dams, three power plants, a water diversion tunnel, are the hydraulic structures in the engineering construction. In all Cambodia's history, there has never been a hydropower project construction on such a large-scale. Because Cambodia's local foundation is limited and weak, the Kamchay hydropower station construction is facing various challenges:

1. The international procurement of equipment and materials. The project has a material shortage, a lot of equipment materials need to be procured from China or elsewhere and

the cycle is long. After many years of war, Cambodia has almost no industry, rarely has a supply of building materials. 95 percent of the materials, equipment and engineering required by Kamchay were imported from China, Thailand, Vietnam and other countries. Because the project needs to be completed quickly, the project department and suppliers have not had time to establish a stable supply network, because communications in Cambodia can be very difficult. In other countries, communication, matching equipment with the production cycle, and the corresponding purchasing plan, can co-ordinate the overall progress of the project scheduling.

2. International transportation challenges. Kamchay and engineering construction needs 700 million Yuan of materials, equipment, thousands of sets of 170 Yuan per month, the peak of 6,000 tonnage ship to ship 3,000 tons of shipping equipment reached five ship. The longest period of procurement is six months, the shortest three months but this may also be affected by unpredictable factors, so resource security becomes the biggest problem in engineering construction. To ensure the material supply is the key to the success of the project in Kamchay. According to the characteristics of international procurement, it is necessary to formulate a detailed international procurement plan, fully understand the tariffs and export policy of purchasing countries.
3. In many countries where high temperatures occur equipment and material site preservation have higher requirements. Cambodia has a tropical climate; the construction site is humid with a high salt content, which demands anti-corrosion equipment for many materials. Before the rainy season, there is a need to ensure that the equipment to be installed has arrived on time, but also to ensure that it is stored properly; this needs comprehensive planning.
4. Hiring foreign employees affected the construction of the project:
 - When considering construction costs, many front-line workers are from the local area. But because this local labour force has no large-scale construction experience or engineering or technical background, technical experts need to be available for on-site guidance, and to provide on-site professional skills training.
 - Influenced by the local culture, Cambodian local workers generally do not like to work overtime. They generally start work on time, but also finish on time. If they work overtime, it is very difficult to convince them that this is a temporary arrangement. Generally this may affect the construction.
 - Local customs and holidays have an impact on the construction schedule. Cambodia has many Buddhists, and the local customs, local holidays, various Buddhist holidays and the King's birthday, all impact on construction time.
 - The project construction investment period, international procurement, international raw material price fluctuations, will affect the purchasing cost, and a longer cycle and changes in the international exchange rate will also have an impact (Figure 4).

Figure 4 The relationship framework of the construction



Kamchay Group is the company implementing the core mechanism of the Kamchay hydropower station project, performance management, decision, command, and coordination functions in engineering construction. The aim is to create a good organizational environment for the smooth progress of the project, to communicate and to coordinate well with the Kampuchean Government departments, strive for the understanding and support of the local government.

The implementation of the “small owner, high service, large construction” keen-witted, capable and efficient mode of operation and management, straighten out the relationship between the new system and management units, design units and the construction contractor, the maximum efficiency of group team; give full play to the role of the expert team, optimization design, to overcome the construction risk, management risk, based on the geological conditions of Kamchay power plant, completed the dam layout, Kamchay hydropower station concrete proportioning; communist party of China of Kamchay hydro committee establish department work for this commission.

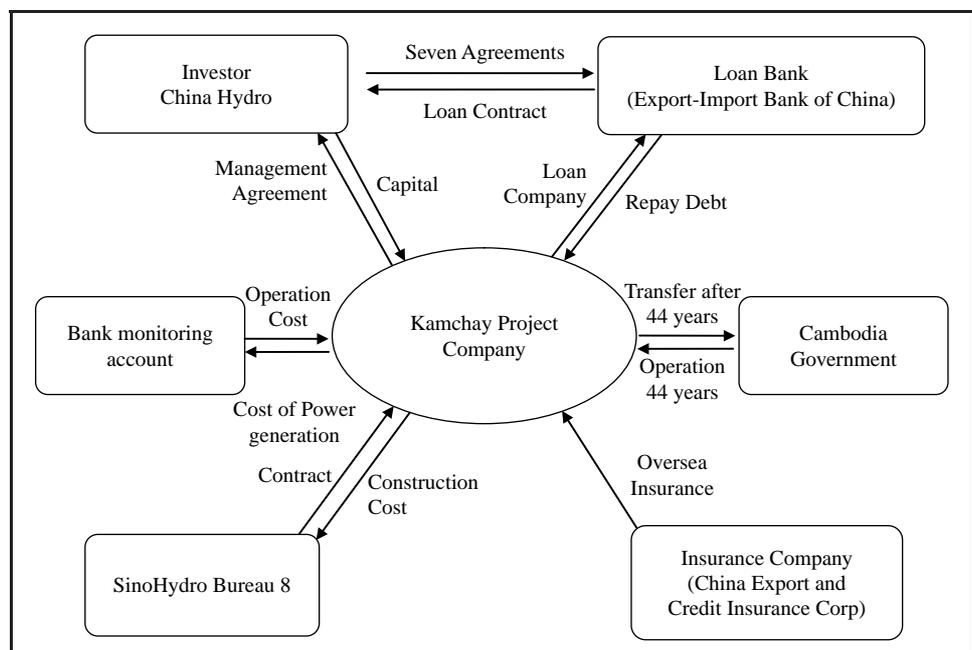
On October 24, 2007, the Kamchay project successfully obtained a generation license permit from the electricity authority of Cambodia, including a license for the construction and investment environment, waste of water resources permit, import licensing, and another six licenses which laid the foundation for the project construction.

4. Financing structure and condition of hydropower station

The Chinese, the investor of the hydropower station BOT project has committed a total amount of US\$280 million. The equity capital is \$80.5 million (approximately equivalent to 640 million Yuan), and debt financing of approximately \$200 million. Equity capital by the company to apply for the soft loan of National Development Bank is 320 million Yuan, and the remaining 320 million Yuan will be provided by the company from its own funds, and the company applies debt financing to the import and export bank of China (Figure 5).

The construction uses the BOT mode. In a BOT project, the most important aspect is the mode of financing, risk sharing, structure, the rate of return on capital verification and other factors. Compared with the traditional way, BOT financing, project design, construction and operation efficiency is generally higher and, therefore, users can get a higher quality of

Figure 5 Project investment related relationship



service. Generally, a BOT project can achieve success mainly depending on the investment side of the profit target and local government pricing policy and company guarantee risk ability.

In the hydropower project, China hydropower international limited received two Chinese policy bank financing plans. These two solutions were considered by China hydropower international firm for several days. The first plan is that the borrowers are the Chinese hydropower Kamchay company. If used in this way, the loan currency can be only dollars, and the loan does not exceed the amount of the debt portion (about \$202 million), the interest rate is calculated using the completed, after the completion of different interest rate differential, the completion of the project to the end of each year to pay off the loan, the repayment, the repayment plan. One of the most important provisions are: the completion of the project, the shareholders of the parent company, is a group of China's hydropower provide servicing guarantees. Scheme two borrowed Renminbi, but seems to be complicated by the parent company of the item company: borrowing, using project financing and EPC ("design, procurement, construction", which is often said that the general contractor) export seller's credit portfolio, borrowing according to EPC contract amount of actual measurement to determine (not more than the debt department 50 percent).

Chinese Hydropower International Company internal launched a fierce debate. For investors, the first pure project financing scheme has many advantages: the investor has limited funding responsibility, also does not assume debt directly, and it will also not affect other corporate financing investors. But the disadvantage is that there is a higher the risk for the loans, and loan conditions are very strict. Due to project involving a wide range, and complicated structure, organizing project financing takes a long time and, at the same time, the borrower is unable to provide Renminbi loans, unable to meet the domestic demand for payment; project financing cost is high, mainly including the upfront cost of financing (such as legal fees) and financing after entry into various expenses, interest and insurance fee for part of the cost. Second, schemes are joining the EPC export seller's credit, advantages is provide Renminbi (RMB) project contracting to meet the needs of domestic project payment. EPC project contracting part can enjoy the state preferential interest rate support, saving the financial costs. General contractor guarantee of simple structure, and easy to operate, but the disadvantage is that the EPC contractor must be the burden of debt, and to find a certain third party guarantee is difficult. Finally, "looking for the third party guarantee" has become a fatal problem. China power international company finally chose the first option.

In June 2006 the company started negotiations with the Export-Import Bank of China (EXIM) Bank on the financing package documents regarding financing for the Kamchay project.

In October 2006 almost a year after the hydropower project signing project agreement, the company arranged for a site visit of the Kamchay project by the Assessment Group, organized by "the EXIM Bank".

In December 2006 the company started the first round of negotiations with "the EXIM Bank" on the loan agreement and serials of security agreements, which comprised the financing package documents regarding financing for the Kamchay project.

In January 2007 the EXIM Bank started to evaluate and assess the financing arrangements of the Kamchay project and finally approved the loan to the project company.

In March 2007 the EXIM Bank issued the loan approval notice. The loan period is for 15 years or less, and the grace period up to four years.

By the end of July 2007 the financing package documents were concluded and the initial withdrawal of the loan would be executed two months later depending on whether the preconditions of initial withdrawal were met, but the company would try to withdraw the initial loan by mid-August 2007.

On August 31, 2007 China Kamchay hydropower company and the Export-Import Bank of China signed the "loan contract", in which the principal part of the project accounts for 30 percent of the total investment, debt financing accounted for 70 percent.

On September 18, 2007 the hydropower project officially started the construction process. The Cambodian Government made the guarantee for nine years, after for the exemption period the price is US\$8.35 cents/kWh, six years after the price of US\$8.696 cents/kWh, 25 years after the price is US\$7.72 cents/kWh. Electricity of Cambodia committed to purchase all the power, payment guarantee provided by the Government of Cambodia.

On December 24, 2007, China Export and Credit Insurance Corp issued overseas investment insurance policies for the project.

On January 30, 2008, Kamchay company and China Export-Import Bank signed the “contract rights pledge and guarantee agreement”, “account pledge agreement”, “insurance policy pledge agreement”, “land and building mortgage agreement”, “equipment”, “collateral agreement sponsors pledge agreement” and “sponsor support agreement”. On January 31, 2008, the Export-Import Bank of China was the first project loan to the China Hydropower Kamchay company accounts, providing a fund guarantee for the smooth implementation of the construction site, and marked the formal completion of Kamchay and project financing.

On March 6, 2009 China Hydropower and the Standard Chartered Bank signed Cambodia Kamchay project financing “interest rate swaps agreement”, to avoid the risk of dollar loan interest rate. According to the stipulations of the contract, of which 20 percent of the loan principal, from 2009 to 2012 6M libor + 1% and 2012-2018 6Mlibor + 1.5% was fixed at 4.72 percent; another 80 percent loan principal, in 6M libor < 6.5%, the 2009 2012 6Mlibor + 1% and 2012-2018 6M libor + 1.5% was fixed at 4.39 percent; 6M libor > 6.5%, swap transaction was cancelled (Table I).

4.1 Financial evaluation

Financial evaluation of the project is carried out in accordance with the current applicable financial and tax policies of the Kingdom of Cambodia.

4.1.1 Sensitivity of Kamchay. The results of the sensitivity studies for availability of construction cost, operation and maintenance cost and electricity tariff are shown as Figures 6-8.

4.2 Evaluation period of project

The financial evaluation period of the project is 44 years including four years for the construction period and 40 years for the operating period.

4.3 Investment plan and fund financing

The construction investment of the project is US\$140 million, and total project investment is US\$280 million. Investment for the project construction is to be financed as follows: 30 percent of total project investment is the principal, and the rest 70 percent comes from a bank loan with an annual interest rate for the construction period of six months of \$Libor + 100BP, operating period is six months of \$Libor + 150BP. The principal will be put into use together with a bank loan according to a year-by-year investment percentage, and it will not be paid back. Principal return comes from the yearly dividend according to the situation of the operation.

Table I Basic data of financial structure

Equity	30 percent of total investment
Bank loans	70 percent of total investment
Loan repayment period	15 years
Annual interest rate of loans	Interest during construction: six months of \$Libor + 100BP Interest during operation: six months of \$Libor + 150BP
Project construction period	4
Operation period	40
Tariff structures	First nine years: 8.35 cents /kWh Six years: 8.696 cents /kWh 25 years after: 7.72 cents /kWh

Figure 6 Sensitivity in relation to operation and maintenance cost

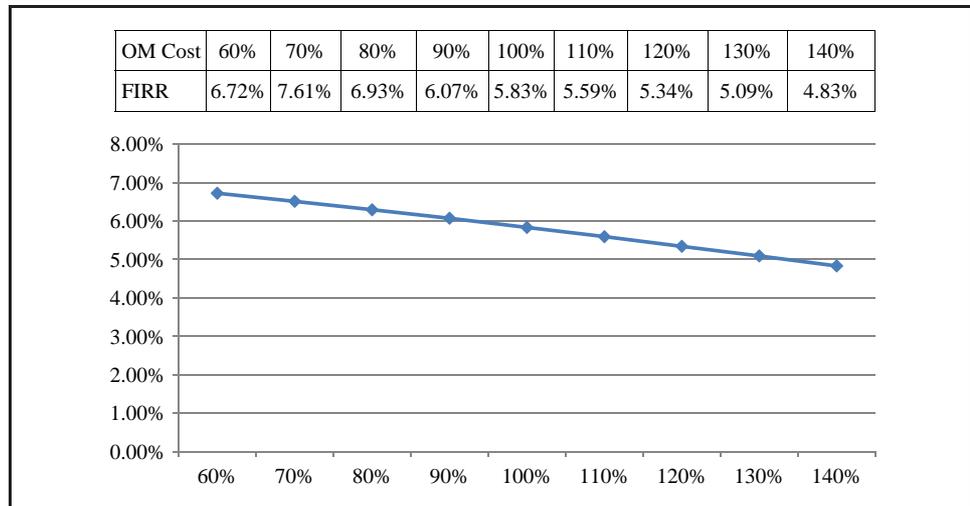
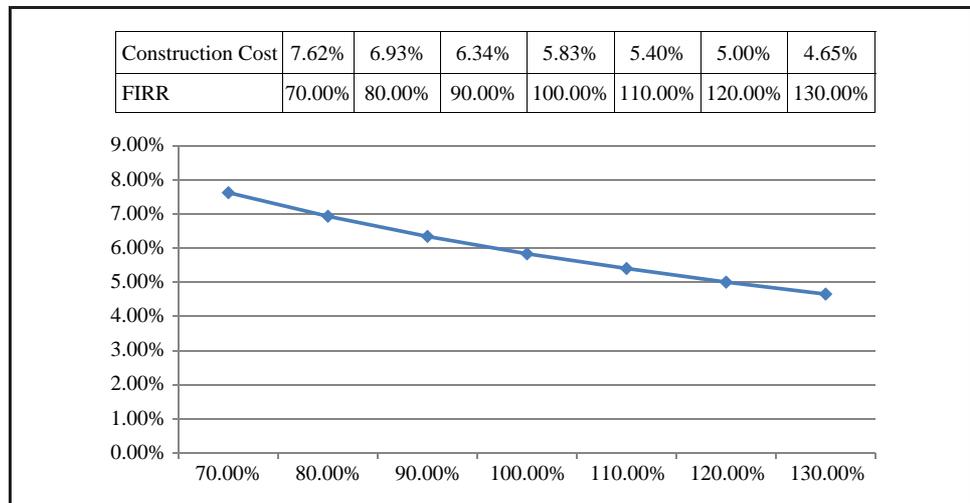


Figure 7 Sensitivity in relation to construction cost



4.4 Production cost

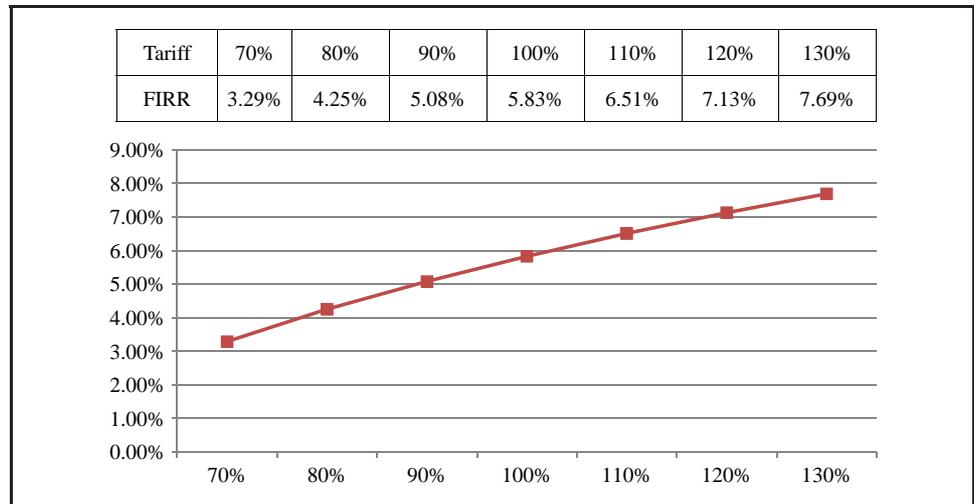
Total generating cost includes operation cost, depreciation and financial costs. Among these, operation cost includes general overhaul cost, material expense, reservoir area maintenance expense, operation staff cost, insurance expense and overhead expense.

4.5 Tax

According to the Tax Law of Cambodia, no value added tax, nor business tax is imposed on sales income from power generation of the project, while a power generation permission fee is imposed on on-grid electricity on the basis of Riel 1.1/(kWh), equating to US\$0.000275/(kWh) (US\$1 = Riel 4,000).

Corporate income tax is imposed at a rate of 20 percent. Interest tax will be charged at a rate of 14 percent of loan interest and included as a fixed asset together with interest for the construction period, while interest tax during the operation is included in financial costs with interest for the operation period. Profit tax is imposed at a rate of 14 percent of after-tax profit of the corporation in accordance with the provisions of the Tax Law of Cambodia.

Figure 8 Sensitivity in relation to electricity tariff



4.6 Sales income

Power revenue is calculated based on the on-grid electricity tariff.

Power revenue = on-grid electricity × tariff.

It is calculated based on the tariff of US\$8.35 cent/kWh to meet the terms of the loan and fair rate of return of the project. Thus, the loan repayment period is 15 years under the financial internal rate of return of 8.66 percent.

4.7 Profit calculation

Power revenue is power generation profit after deducting generating cost and power generation permission fee, and after-tax profit after deducting income tax, and retained earning after further deducting withholding tax.

4.8 Loan repayment

The loan and interest should be paid off in equal principal mode within 15 years, with depreciation amount and after-tax profit taken every year. A short-term loan should be used if funds for repayment are insufficient.

5. Conclusion of financial evaluation

Construction investment of the project is US\$140 million, and total project investment is US\$280 million. On-grid tariff during the operation period is US\$8.35 cents/kWh, and the loan repayment period is 15 years. Financial internal rate of return on project investment after income tax is 8.75 percent, which is higher than the loan interest rate. Rate of return on total investment of the project is 7.4 percent, with an internal rate of return on principal of 8.66 percent.

Since the power supply in Cambodia is quite limited and mainly depends on diesel units of small installed capacity or energy has to be imported from other countries, it is of low efficiency and high cost, and it cannot meet the power demands of Cambodia which makes its tariffs high. Therefore, the project can ease the situation of power shortages and high tariffs and play a positive role in promoting the development of the local economy, providing more employment opportunities and improving people's living standards. The project construction will be of benefit for improving the poor hydropower regulation situation in Cambodia, and increasing generating capacity in the dry season.

6. The success of Kamchay hydropower

On December 7, 2011, Cambodian Prime Minister Hun Sen, pressed the power button at Kamchay, marking the project successfully completed and putting it into commercial operation. This has changed Cambodia's history of electric power. At the speech Prime Minister Hun Sen:

[...] thanked the Chinese government for, in a time of an international financial crisis and the tightening of foreign investment, not only did it not reduce or stop investment projects in Cambodia, it also continued to vigorously support the Cambodian infrastructure. Investment in the construction of a hydropower station, 40 years later, will allow Cambodia to realize the long-cherished relationship between Cambodia and China. The construction of the plant not only provides power resources cheaply for Cambodia, but it also benefits the local people in flood control, irrigation, water supply and so on, and makes a positive contribution to promote bilateral economic development.

On December 13, the formal power generation was delivered to Phnom Penh at 10 a.m. for 10 minutes. On June 4, 2013, the investment of Kamchay hydropower station in Cambodia was completed, and put into commercial operation with a total generating capacity of 450 million kWh. According to the agreement, China Electric Power Construction Group Company has the right to hold the hydropower station for 40 years of commercial operation management, with an average price of US\$8 cents per unit, an annual power generation of 498 million kilowatts. According to the agreement a rough calculation of a hydropower station business has a value of \$1,600 million, which far exceeds the beginning of construction period of the investment.

7. Conclusion

Cambodia Kamchay hydropower BOT project is the first foreign investment that is strategically important for infrastructure construction. The government gave great encouragement and support, but with the passage of time, and the changes in the international market, economic change and many other factors may affect the current operations. The enterprise must adapt to the changes of the economic policy and the social environment, and we must make corresponding preventive measures for different risks, improve economic policy to adapt to the contract and government. Practical strategic skills are also needed to deal with possible solutions to the problems and deal with the competition. As long as we continue to predict possible future problems, and provide corresponding measures to solve them, we will be able to make the enterprise have continuing stability in the future [1], [2], [3], [4], [5], [6], [7].

Notes

1. Electricity Authority of Cambodia: www.eac.gov.kh/
2. Ministry of Economic and Finance: www.mef.gov.kh/
3. Electricite Du Cambodge: [www.edc.com.kh/Annual Report \(2006-2011\).](http://www.edc.com.kh/Annual Report (2006-2011).)
4. Ministry of Industry Mine and Energy Annual Report (2011).
5. China Water Conservancy and Hydropower Construction Ltd www.sinohydro.com/
6. Ouyang Jianwei. (2010) Kamchay project financing risk analysis and prevention plans. *Financial*, pp. 161-162.
7. Zhang Fangan. Wan Hailong. Yan Yali. (2011) Coordinate function practice of hydropower BOT project management. *Northwest Hydropower*, pp. 90-95.

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