

# EVALUATION AND COMPETITIVE TENDERING OF BOT POWER PLANT PROJECT IN CHINA

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**ABSTRACT:** The tremendous economic growth in China has resulted in an immense demand for basic infrastructure like roads, ports, and power generation facilities. There are thus many investment opportunities for foreign investors. At the same time, some innovations have also been introduced in procurement practices. For example, the build-operate-transfer (BOT) scheme, open competitive bidding, and fully foreign ownership were adopted at the end of 1996, when the concession of the first state-approved BOT project, the Laibin B power plant project in Guangxi Province, was awarded. It is important, therefore, for foreign investors to understand the current regulations, approval procedures, and evaluation and competitive tendering of privatized infrastructure projects by the government-approved BOT project agents in China, in order to secure concession contracts and manage the associated project risks well. This paper discusses these innovations, the roles of the BOT project agents, and the evaluation and competitive tendering of BOT projects in China based on the Laibin B power plant project. The lessons for investing in future similar BOT projects in China are also drawn.

## INTRODUCTION

China is a land of opportunity and an untapped mine of investment opportunities for foreign investors. With a population of over 1.2 billion, it has potentially the biggest consumer market in the world. More importantly, its economy has grown faster than that of any other place in the world for the past 18 years. This tremendous growth has resulted in an immense demand for basic infrastructure like roads, ports, and power generation facilities. To meet the development needs, the Chinese government has been enthusiastic in granting favorable concessions to attract foreign investment. Favorable policies have also been introduced to encourage infrastructure investments.

Although China may have achieved one of the world's highest GDP growth rates—10% real growth per annum over the last decade—it is also the first to admit its problems: the shortcomings of its infrastructure. For example, China's rapid economic progress demands much more electricity. Between 1990 and 1995, China's consumption of electricity grew by an average of 9% per year, and the Ministry of Power Industry (MOP) has estimated the current shortfall in power supply to be around 20% (New 1997).

The World Bank has estimated that China's expenditures in infrastructure will rank top among all East Asian countries and are expected to account for \$750 billion over the period 1995–2004. In China's eighth five-year plan (1991–1995), the government set a high priority on infrastructure. The ninth five-year plan (1996–2000) unveiled by the Chinese central government early in 1996 lays even greater emphasis on infrastructure development. Roads and power command top priority. Projections indicate that China plans to boost the total

installed capacity (TIC) of electric power by 90 GW, i.e., 40% of current TIC. This requires a total investment of \$100 billion, about 20% of which, i.e., \$20 billion, will come from foreign capital investment (Lianhe 1996; New 1997).

In a nutshell, the modernization of China's power industry features prominently in the plans of the Chinese central government, and the massive development envisioned over the next decade will require input of foreign capital and technology. China recognizes this need, and encourages foreign investors accordingly.

Despite the tremendous opportunities, undertaking power infrastructure business in China presents its risks and obstacles. The traditional methods of project finance and risk allocation mechanisms that are available in other countries generally do not yet exist or are restricted in China. Project approval processes are often unclear, and their outcomes can be inconsistent. The ground rules of business are changing rapidly with evolving regulations as China opens its economic development further to foreign capital. Other factors are China's embryonic legal structure and immature economic market and banking system. There is a greater reliance on getting the right approvals rather than on the enforceability of onshore contracts (Orr 1997). In addition, China is wary of foreign control and dominance over this key sector of its developing economy. The complex interplay between politics and economics that affects every aspect of investment in China is evident in this arena. While the local and provincial governments and power bureaus are keen to obtain direct foreign investments, there is strong resistance from the more cautious factions within the central government. The resultant problems were China's failure to provide clear policies and guidelines regarding permissible rates of return on power projects and foreign exchange guarantees (New 1997).

It is therefore important for foreign investors to understand the current regulations, approval procedure, tender system, evaluation criteria, and competitive tender procedure related to power projects (Tiong 1992, 1995). This paper will discuss these issues, especially the evaluation and competitive tender of build-operate-transfer (BOT) power projects in China, based on a detailed study on the first state-approved BOT power project in China—the Laibin B power plant (Laibin B).

## CURRENT REGULATIONS ON FOREIGN INVESTMENT IN POWER SECTOR

In March 1994, the MOP promulgated *Interim Regulations for the Use of Foreign Investment for Power Project Construction* (the "MOP guidelines"), which set out guidelines appli-

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cable to all types of foreign investment by foreign organizations and individuals in electric power projects in China. Direct investment by foreign investors may take the form of establishment of an equity or cooperative joint venture with a Chinese partner. Foreign investors may do this through investment in construction and operation of new power plants, investment in expansion and technical upgrading of existing power plants, or purchase of equity in existing power plants. The foreign equity interest in existing plants should not exceed 30%. While in December 1993, the State Council (SC) indicated that wholly foreign-owned power projects would generally not be permitted, under the new MOP guidelines, foreign investors may now apply to the State Planning Commission (SPC) for approval to establish wholly foreign-owned and foreign-operated power plants.

Although national joint venture legislation sets no limit on the term of joint-venture establishment, the March 1994 MOP guidelines stated that the term of cooperation shall be limited to 20 years for thermal power plants and 30 years for hydroelectric power plants, excluding the construction period. In addition, for key power projects involving unit capacity of over 300 MW and total capacity of over 600 MW, Chinese parties should maintain a controlling stake. All indications are that China intends to retain full control over its power industry, while foreign investment is encouraged in the construction and modernization of plants (Baker 1996).

The situation, however, has changed a little since late 1996. China is gearing up for the introduction of BOT on a larger scale. The central government has selected a batch of road, bridge, water supply, and power projects for the implementation of BOT on a trial basis. China will use the BOT method to bring more foreign capital into infrastructure projects ("BOT" 1996). In its effort to encourage China's move to BOT schemes, the Asian Development Bank has given a \$2.6 million grant to the MOP to accelerate the implementation of build-own-operate (BOO) and BOT projects ("SPC" 1996).

China began its experimental scheme with Laibin B, the pilot BOT project approved by the SPC that will test full foreign ownership and peg tariffs to the marketplace. It is the second-phase project for the Laibin power plant, with an estimated capacity of  $2 \times 350$  MW coal-fired units and an estimated cost of \$600 million [5 billion RenMinBi (RMB) yuan]. It is located in Laibin County of Guangxi Zhuang Autonomous Region (Guangxi Region), a southern Chinese backwater province where most foreign investors might not venture willingly. The concession terms require a very tight completion schedule and appear to offer a relatively low rate of return. But the prospect of joining the first consortium to test the new BOT framework was incentive enough for a number of developers to submit tenders. The Electricite de France and GEC Alsthom consortium, which tendered under the name of the consortium, finally won the concession over five other short-listed tenderers with a very aggressive tender and the backing of France's export-credit agency, Coface (*Memorandum* 1996).

If the Laibin B BOT experiment works, it is argued, then financing the rest of China's vast power requirements will be that much easier. Laibin B will be a new trailblazer model of similar future BOT projects for the construction of roads, ports, bridges, and airport development. BOT-type equity ventures in China would also become the model investment vehicles for major foreign industrial companies looking for openings in China in the 21st century.

Actually, several power plants and roads have already been built on a BOT basis in China. And a few of these were meant to be model projects. This time around, however, the key innovations are that the developer will only be awarded the contract after a competitive tendering process and that the foreign consortium will be able to win 100% of the operating com-

pany. In addition, the successful tenderer will have to finance its project from a revenue stream based on a letter of comfort from the provincial government supporting off-take agreements instead of the guaranteed returns that have characterized many projects in China (Orr 1997).

The government also intends to work out a risk-sharing scheme under which it will bear some risks, while the concessionaire bears the rest. The government was willing to guarantee contract renegotiations if changes in government policies adversely affect the project. If companies operating the projects face substantial economic losses due to the readjustment of Chinese policies, they will be allowed to extend the period of agreement or increase tariffs on the project ("BOT" 1996).

These innovations are also the main principles of the newly promulgated *Regulations for Foreign Investment Concession Project* by the SPC (He 1996). The central government seems to be moving with uncommon speed to get the documentation in order and to get Laibin B off the ground. China has gone to the extent of hiring foreign advisers. That is indeed very new in China. For example, the French law firm, Gide Loyrette Nouel, worked on the legal requirements for the tender documents. SBC Warburg of Hong Kong has been engaged as the financial adviser to the central government-backed Bridge of Trust Infrastructure Investment Consulting Co. Ltd. Price Waterhouse was brought in to help draft documents on an earlier project—Waigaoqiao in Shanghai—that was dropped from the short list of BOT pilot projects. For these reasons, and because Laibin B is the first BOT project in China, it is meaningful and helpful to study and draw lessons from the project. For example, the documents for Laibin B will most likely be used for the Changsha power plant, the second state-approved BOT project, where more fine-tuning can be expected (Orr 1997).

## GOVERNMENTAL EVALUATION AND APPROVAL OF FOREIGN INVESTMENT PROJECTS

The SPC and local planning commissions are in charge of evaluation and approval of project proposals and feasibility study reports of foreign investment projects. The interior provincial governments, and ministries and commissions concerned under the State Council, have the power to evaluate and approve projects with a total amount of investment below \$10 million. The local governments of special economic zones and the coastal cities have the power to evaluate and approve projects with a total amount of investment below \$30 million, while the SPC is responsible for those projects that are above \$30 million.

The governmental departments in charge of investment projects of power stations are the MOP and the local electric power bureaus.

The contracts and articles of association of equity and contractual joint ventures, and wholly foreign-owned enterprises, are evaluated and approved by the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) and the foreign economic and trade departments of provinces.

Before the signing of the contract and articles of association, application for registration of the enterprise's name must be filed and submitted in accordance with the *Provisions on Administration of Enterprise's Name Registration* issued on May 6, 1991, and the *Announcement Concerning Name Registration of Foreign-Invested Enterprises* issued by the State Administration for Industry and Commerce (SAIC) in May 1993. The foreign-owned enterprise has to use the approved name. After approval of the contract and articles of association, the foreign-owned enterprise applies for registration as a legal entity by submitting to the SAIC the approved documents, signed

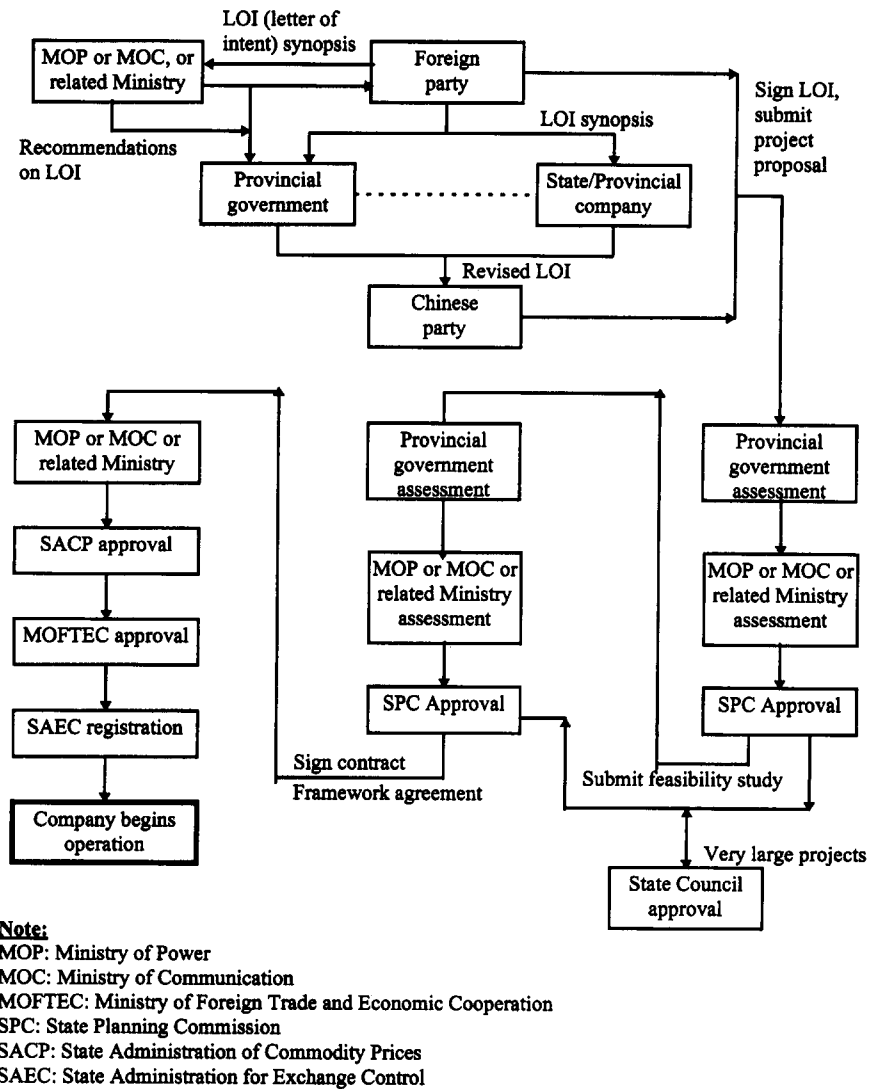


FIG. 1. Approval Procedure for Foreign-Invested Project in China

contract and articles of association, approved feasibility study report, and other documents required by the administration.

In accordance with the *Regulations for Foreign Investment Concession Project* jointly issued by the SPC, the MOP, and the Ministry of Communication (MOC) in 1996, foreign-funded concession projects are allowed on an experimental basis. The selection of an experimental concession project would involve all administration levels, with such projects having to form part of the medium-term or long-term state plan. A preliminary feasibility report on the selected concession project would be provided by the planning department of the region or city where the project is located. It is submitted to the SPC for evaluation and approval after preliminary approval by the departments in charge of the enterprises. When necessary, the same has to be submitted to the SC also. After the preliminary feasibility report is approved, the local government prepares the prequalification and tender documents, and chooses an overseas sponsor by means of an open competitive tender. The successful tenderer, with the assistance of the local government, then applies to the MOFTEC for approval of articles of association and to the SAEC for registration of the project company. After the Concession Agreement (CA) is approved by the SPC (or by the SC, if necessary), it is signed officially between the project and the authorized government of the province or the authorized department in charge, and is brought into effect at the date of signing ("In-

struction" 1995). The approval procedure is shown in Fig. 1 (Orr 1997).

## ROLES OF BOT PROJECT AGENCIES

The award of the foreign-investment concession project, according to the regulations, should usually be made through an open, competitive tender. To expedite the decision-making process, the local government where the project is located will usually commission a specific BOT project agency. The agent will represent the local government in the implementation of the project on a BOT basis. The scope of work will include the initial planning, preliminary financial feasibility study, prequalification, tendering, evaluation, negotiation, and dealing with other relevant matters (*Memorandum* 1996). Being a bridge linking overseas investors and the Chinese government, the agent could assume multiple roles such as project agent, sponsor, and consultant. Currently, there are three such agents. They are Bridge of Trust, agent for Laibin B; the Beijing BOT Investment and Development Co. Ltd. (Beijing BOT), agent for the Beijing-Tongxian expressway; and the BOT International Project Development Co. Ltd. (BOT International), agent for the Wangcheng power plant in the city of Changsha in Hunan province, which is the second BOT project approved by the SPC. These agents are all government-backed and have been given special privileges. For example, Bridge of Trust is

jointly owned by the SPC together with the Chinese ministries of construction, trade, and electric power (personal communication, 1997). Hence, it has strong influence at the central government level. It has also close liaison with the European Union companies and European export credit agencies. The agent's scope of work is determined and commissioned by the local government. For the Laibin B project, Bridge of Trust has been solely representing Guangxi government in preparing the implementation of the project on a BOT basis. These agents usually charge the local government about 0.5% agent fee. For example, Bridge of Trust earned about \$3.5 million by acting for the Guangxi government in the Laibin B project (personal communication, 1997).

Beijing BOT is financed and sponsored mainly by the China Huaneng Group, which is a large, state-owned enterprise group ratified by the SC for multi-industrial business development. The group also engages in the development of coal, cement, steel, chemical industry, high and new technology, trade, finance, and overall utilization of resources. The BOT project sponsored by the corporation includes the Beijing-Tongxian expressway (Wang 1996). BOT International is newly and specially incorporated for the Wangcheng power plant in Changsha.

## OVERVIEW OF TENDERING SYSTEM IN CHINA

Tendering has been used in Western countries for more than 200 years. In China, the practice of procuring building and civil engineering works through tender dates back to the turn of the last century. Following the Opium War (1839–1842), China was forced open to Western countries and the tendering procedure was brought into the country. It was used in the coastal areas and major urban centers up to 1949, when the People's Republic of China was established in Beijing. During the period from 1949 to 1957 the government allocated a major portion of construction works to local construction enterprises. This was done through a contracting system in which a contract was entered into between a government agency and a construction company that provides for obligations and liabilities of the parties to the contract. The contracting system worked quite well during that period. However, in subsequent years the contract system was condemned as a capitalist practice and was abandoned. In 1978, the Third Plenary Session of the 11th Central Committee of the Communist Party of China declared China's economic reforms and open-door policies. The State Construction Commission (the predecessor of the Ministry of Construction) followed suit by preparing and issuing the *Recommendations on Contracting Capital Construction Projects* in April 1979. The document required that a contract be entered into between the client and construction company to build a state project. Soon after the issuance of the document, the tendering system was adopted formally in Shenzhen Special Economic Zone for allocation of construction works in the early 1980s. The tendering system proved effective in shortening completion time, improving quality, and lowering costs of construction works. This practice caught the attention of the central government and was adopted as a measure for reforming the Chinese construction industry during the Second Plenary Session of the Sixth National People's Congress, held in May 1984. In September of the same year, the SC promulgated a document related to construction industry reform requiring that the tendering system be used for allocating construction work. Since then, the tendering system has become increasingly popular in China. In 1988, the completed floor area of building works allocated through competitive tendering was estimated at 53,030,000 m<sup>2</sup>, accounting for 25.4% of total completed building floor area in China. In the more developed cities of China, such as Guangdong, Fujian, Beijing, Shanghai, Liaoning, and Jilin, the construction work

allocated through tendering accounted for over 60% of their total construction projects. Therefore, a market for construction enterprises to compete with each other had taken shape, which in turn has facilitated the development of the construction industry in China (Wang and Lu 1996).

Foreign enterprises, however, were not permitted to tender for any construction works in China until 1994, when the Ministry of Construction issued a decree on the *Temporary Provisions for Foreign Contractors to Be Qualified for Undertaking Construction Works in China* (1994). The document became effective on July 1, 1994. The purpose of the decree was to bring under the exclusive administration of Chinese governments foreign contractors who had already been or would be involved in construction activities in China.

The provisions require that all foreign contractors who intend to undertake construction of building or civil engineering works, or installation of pipelines or equipment, apply for pre-qualification and a qualifications certificate to the Ministry of Construction or the local construction administration authorities.

The licensed foreign contractors are allowed to tender only for construction works that are financed (1) directly by foreigners; (2) by loan made entirely by foreign financial institutions and obtained through open competitive bidding; (3) by joint venture between Chinese and foreign investors, when the local contractors cannot execute the works on their own for technological reasons or; (4) by local entities, when the local contractors for some reasons are not capable of executing on their own. When bidding for those under the fourth category, the foreign contractors are required to form a joint venture with the local contractors subject to the approval of provincial construction administrative authority.

In addition, foreign firms that intend to secure design jobs in China should apply for permission according to the *Temporary Provisions on Design Services Joint Venture*.

As mentioned previously, from the end of 1996, the BOT project will be awarded to a foreign developer only after open, competitive bidding, while previously it was awarded through direct negotiations.

## CHARACTERISTICS OF TENDER SYSTEM IN CHINA

According to the *Tender Procedures for Building and Civil Engineering Construction Works* issued in 1992, all construction projects, except those of special nature, shall be procured by way of tendering, either on a competitive or negotiated basis, or sometimes a combination of both (*Tender* 1992). The tender methods commonly used in China are open competitive tender, selective competitive tender, and negotiated tender. For BOT projects, the open competitive tender was adopted at the end of 1996.

Now that the economic system of China is in transition from a planned economy to a market economy, the tendering system in China and its characteristics can be grouped into the following categories:

1. The local tenderers are all from publicly owned enterprises. Who wins or loses the contract thus makes no difference to the government. Foreign companies are confined to tender only for some specified projects, as mentioned previously.
2. The tendering competition is limited and guided by the governments. The construction works available for tendering are all included in the state's capital construction plan. The clients and contractors are required to be pre-qualified by governments. The governments have their own agencies in charge of preparing the pricing. The tender prices must be calculated based on the state's required format and the local tenderers should also adopt

the state's standard pricing with only a limited spread allowed.

3. The tender process is to be carried out under the administration and supervision of a government agency in charge.

## TENDER ADMINISTRATION

The Ministry of Construction is responsible for the overall administration of the tendering activities throughout the country, while the construction authorities are responsible for those within their own areas.

At present, there are four types of administrative arrangement:

1. A leading group responsible for the tender process is formed by the officials from the authorities concerned. The group members are usually from the Construction Commission, Planning Commission, Fiscal and Auditing Bureau, Industrial and Commercial Administration Bureau, and the People's Construction Bank of China. An office under the leading group is set up to handle routine matters related to the tender. The tender opening, evaluation, and award of contract of key construction projects are usually arranged and administered by the leading group.
2. A separate tendering office formed of professionals is set up by the Construction Commission. The rules and regulations related to the tender process are formulated jointly by the Construction Commission, Planning Commission, Fiscal and Auditing Bureau, Industrial and Commercial Administration Bureau, and the People's Construction Bank of China, with the Construction Commission representative as the leader of this office.
3. A bidding management unit is formed, consisting mainly of staff from the organizations administering the project and some officials from local authorities who are responsible for the whole tender process.
4. An agency is created and entrusted with the whole process.

The first form is not popular. The second form is now the most popular in China. The third form is used mainly for key projects. However, it is slowly being converted to the second form. The fourth form was adopted recently and is currently only used for BOT projects.

The main tasks of the government administration organizations include prequalifying contractors, reviewing and approving the client's application for calling for tenders and tender documents, evaluating tenders, arranging and supervising tender opening, tender evaluation and award of contract, making arbitration regarding the disputes that occur during the tender process, penalizing the organizations or individuals who violate tender procedures, and supervising the signing and performing of the contract.

## QUALIFICATIONS CERTIFICATE FOR FOREIGN CONTRACTORS

The provisions require that all foreign contractors should apply to the Ministry of Construction or the local construction administration authorities for prequalification and a qualifications certificate.

Foreign contractors who have operations in more than two provinces, autonomous regions, or municipalities (cities directly under the central government) should apply to the Ministry of Construction for a Qualifications Certificate. Foreign contractors who intend to tender for construction contracts in the special economic zones (i.e., Shenzhen, Zhuhai, Shantou,

and Xiamen) and the cities open to foreigners (i.e., Dalian, Qinhuangdao, Yantai, Qingdao, Lianyuengang, Nantong, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai) should apply to the local authorities of the zones or cities for the certificate. Otherwise they should apply to the provincial construction authority in charge of the construction works.

The foreign contractors are required to submit the following documents and information when they apply for prequalification and the qualifications certificate:

1. The letter of intent and the letter of acceptance signed by the client of the project and the agreement entered into by the client and the foreign contractor
2. Application for bidding for construction works in China signed by the legal representative of the foreign contractor
3. The original or a copy of the business license issued by the Chinese government registration agency
4. The reports on the financial standing of the contractor for the past three years, and other supportive documents issued by the contractor's auditing office, bankers or other financial institutions
5. The names, sizes, and locations of the works completed by the contractor within the past five years, and the written comments made by their clients on the completion period and quality
6. The qualifications and experience of key technical and managerial personnel available for administration and execution of construction works in China
7. The foreign contractor's scope and places of business in China
8. The address of the contractor's resident office in China
9. The preliminary evaluation of the foreign contractor made by the provincial construction administrative authority
10. Three copies of the completed form of application for the Qualifications Certificate. The Ministry of Construction or the local authority will give notice of their decision whether the certificate will be issued to the applicant within 30 days of receiving the application.

The foreign contractor who has been given the qualifications certificate should also register with the local Industrial and Commercial Administration Bureau. The qualifications certificate has a validity period of 5 years. Within 6 months of expiration, the contractor should renew the certificate.

Foreign contractors must make sure that they will be successful in obtaining construction contracts before applying for the qualifications certificate. Otherwise, they cannot be given the certificate.

The qualifications certificate can only be applied for by a single foreign contractor, i.e., the application cannot be made in the joint names of several foreign contractors.

As far as a group and its subsidiaries are concerned, only the entity, group, or subsidiary that has obtained the contract is eligible to apply for the certificate.

## DEVELOPMENT PROCESS OF LAIBIN B

### Initial Planning

As mentioned before, the 2 × 350 MW Laibin B is the second-phase project for the Laibin power plant, which was planned to meet the demand for electricity in the Guangxi region. It was postponed for many years as the Guangxi government could not raise the required finance. The Guangxi government then applied to the central government for approval to adopt the BOT scheme to develop Laibin B.

- In February 1995, the Guangxi government officially en-

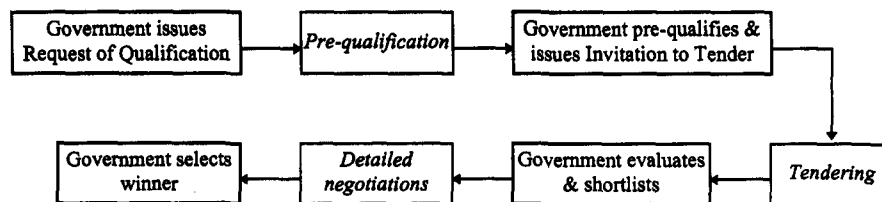


FIG. 2. Selection Process in Competitive Tender of BOT Project

trusted Bridge of Trust with the task of inviting foreign investors to construct Laibin B on a BOT basis.

- From February to March 1995, after preparing the preliminary feasibility study for Laibin B in accordance with international practice and in compliance with the actual requirements in China, Bridge of Trust submitted an executive proposal and financial feasibility study report for constructing Laibin B on a BOT basis. It then assisted the Guangxi government in seeking approval from the central government.
- On May 10, 1995, the SPC officially approved Laibin B as the pilot BOT project in China (personal communication, 1997).

The subsequent BOT development process of Laibin B, which follows the typical evaluation and selection process as defined by Tiong (1997), is shown in Fig. 2 and described hereafter.

### Prequalification

- In August 1995, Bridge of Trust completed the prequalification documents for Laibin B in China and issued an invitation for prequalification in the *People's Daily* and *China Daily*, publicly inviting potential investors from abroad to participate in the prequalification for China's pilot BOT project.
- By September 30, 1995, a total of 31 applicants had submitted their applications for prequalification; 23 were individual companies, while eight others were consortia, including some of the best-known power utilities in the world.
- By early October 1995, Bridge of Trust and its advisors had reviewed the prequalification proposals submitted by each tenderer. The Evaluation Committee then reached a unanimous agreement to list the applicants in two groups: A and B. Group A, with 12 applicants, was made up of companies that were allowed to tender either individually or as a member of a consortium as they were considered to be candidates with strong experience in developing power projects. They were also seen as those with adequate financial strength and other relevant experiences. Meanwhile, another 19 applicants, listed as group B, were allowed to tender only in a consortium jointly with one or several of the group A applicants. On October 28, 1995, Bridge of Trust issued the invitation to tender on behalf of Guangxi government.

### Tendering

The procedure and criteria Guangxi government used to choose the successful tenderer are as follows. The Guangxi government would rank the tenders and select up to three of the most competitive tenderers. The Guangxi government would then clarify with the three tenderers, including the proposals and proposed changes provided by tenderers on the basis of tender documents. The confirmation would proceed from the most competitive tenderer as set out in the ranking order to the other two to the satisfaction of Guangxi government ("Instruction" 1995).

- On December 8, 1995, Bridge of Trust completed the tender documents and formally released them to the pre-qualified applicants. All 12 of the applicants in group A purchased the tender documents at a cost of \$12,000 per set.
- From December 1995 to January 1996, Bridge of Trust organized on-site inspections of the Laibin B site for each potential tenderer.
- On January 28, 1996, Bridge of Trust conducted the pre-tender meeting for Laibin B, during which concerns related to legal and financial issues were clarified. On February 12, 1996, Bridge of Trust issued the *Memorandum for Pre-Tender Meeting* for Guangxi Laibin B.
- By 4:00 p.m. on May 7, 1996, a total of six tenderers had submitted their proposals. They were:
  1. China Energy Investment Co. Ltd.–Siemens consortium
  2. International Generating (HK) Co. Ltd.
  3. Tomen Corporation–Singapore Power International (Pte) Ltd.–Union Energy Co. Ltd.–Toshiba Corporation consortium
  4. The Consortium, comprising the Electricite de France and GEC Alstom
  5. National Power PLC (UK)–Mitsui & Co., Ltd. consortium
  6. New World Infrastructure Limited (UK)–AEP Resources International–ABB Energy Ventures consortium
- On May 8, 1996, Bridge of Trust conducted the tender opening for Laibin B.

### Tender Evaluation

- From May to July 1996, the Evaluation Committee clarified and analyzed the tender proposals from legal, financial, and technical angles. Bridge of Trust assisted the Evaluation Committee in evaluating the tenders.
- By June 18, 1996, the Evaluation Committee had ranked the tenderers and selected the three most competitive tenderers in accordance with the evaluation criteria in the tender documents. They were:
  1. The Consortium
  2. New World Infrastructure Limited (UK)–AEP Resources International–ABB Energy Ventures consortium
  3. International Generating (HK) Co. Ltd.
- From July 8, 1996, to early November 1996, Bridge of Trust held negotiations with the Consortium.
- On November 11, 1996, the Guangxi government and the consortium signed the concession agreement in Beijing. Table 1 summarizes its main information.

### EVALUATION CRITERIA FOR LAIBIN B

The following evaluation criteria were used by the evaluation committee:

1. Electricity tariff (60% weight in evaluation). The most significant criterion is the unsubsidized tariff rate, which

**TABLE 1. Summary of Laibin B Project ("Laibin" 1997)**

Project features (1)	Details (2)
Project location	Laibin County, Guangxi Region, China
Project description	Construction of a coal-fired 2×350 MW power plant next to the Laibin A 2×125 MW power plant
Project cost	Approximately \$650 million
Client	Guangxi government, China
Sponsors/developers	Electricite de France (EDF) (60%) and GEC Alsthom (France) (40%)
Ownership	Build-operate-transfer (BOT)
Financing	Limited recourse
Concession agreement	18-year concession period including construction
Power Purchase Agreement (PPA)	18-year PPA initialed with the Guangxi Power Industry Bureau
Fuel Supply and Transportation Agreement (FSTA)	18-year FSTA with Guangxi Construction and Fuel Co. will be signed when loans are signed
Tariffs	Fixed tariffs with pass-through of fuel cost and foreign-exchange fluctuation
Sovereign guarantees	None
Lead banks	HSBC Investment Bank, BZW and Banque Indosuez are lead arrangers, with Banque Indosuez also acting as coordinating bank
Financial adviser	BZW
Legal advisers	Freshfields (HK) for the sponsors; Linklaters & Paines (HK) for the lenders
Consultants	Mott Ewbank Preece (technical) to lenders; Sedgwick (insurance) to lenders
Equity	Total equity is estimated at 25% of total cost, approximately \$163 million
Debt	Total debt financing of approximately \$490 million provided by HSBC Investment Bank, BZW and Banque Indosuez. First tranche a \$300 million French export credit covered by Coface (12-year repayment period). Second tranche a \$190 million commercial loan (10-year maturity door-to-door)
Political risk coverage	Coface tranche
Contractors/equipment supplier	GEC Alsthom will head a consortium comprising EDF for the turnkey construction contract
Tender process	Open competitive
Tender schedule	Closed. Concession agreement initialed November 1996
Status	Financial close expected May 1997; construction will begin at that time
Target completion date	2000

represents a sharp break from past practices. The Evaluation Committee compared the tenders on a levelized tariff basis to evaluate the annual electricity tariff proposed for the entire concession period. It considered the annual changes of such tariff; the proportions of foreign exchange and the local currency, RMB, in such tariff; and the tariff of additional net electricity output. Fig. 3 shows the tariff form provided in the tender document.

One of the most important reasons the Consortium won the concession is that it provided the lowest electricity tariff (much lower than the second competitor) of RMB 0.40 yuan (less than 5 cents) per kilowatt-hour (before tax), which is close or equivalent to the current tariff in urban cities of China. This offer, as estimated by the Consortium, would yield a return of 17.5%, lower than the company's average of 18% ("Laibin" 1996). The Consortium's tender was reported to be based on a sub-contract to acquire turbines from a Chinese manufacturer, which helped keep costs down and was especially welcomed by the Chinese government ("EdF" 1996).

The high priority set on a low tariff is due to the fact that China is still a socialist and developing country, and

the government has to protect its people from too high an electricity tariff (personal communication, 1997).

2. Financing proposal; technical proposal; and operation, maintenance, and transferal (OMT) proposal (40% weight in evaluation). The Guangxi government considered the feasibility of the tenderer's financing proposal, including financing schedule, financing cost, ability to finance, and extent of equity committed by the tenderer; the reliability and quality of the technical proposal; and the feasibility and viability of OMT, including administration, personnel training, and power plant transferal plan, in respect to the interests of the Guangxi government.

Of the 40% total weight in evaluation, the financing proposal accounts for 60%, while the technical proposal and OMT proposal account for only 20% each. The Guangxi government adopted a lower weighting for the technical proposal because (1) The tender document already specified that international technical specifications and standards will be used for Laibin B; and (2) lenders (banks) are surely more concerned with the technical feasibility of Laibin B and will certainly examine more carefully the tender's technical proposal. Hence, the financing proposal is more important than the technical proposal and OMT proposal (personal communication, 1997).

## CONCLUSION

In China, many investment opportunities are available for foreign investors due to the tremendous economic growth that demands immense development of basic infrastructure, especially power generation facilities. However, China's unique culture and social system, which are not familiar to many foreign investors/contractors, make the tendering system in China different from that of Western countries. As a result, the administrative procedures and regulations that foreigners have to follow are also different and sometimes a little confusing. It takes time and patience to get familiar with all this. Only those foreign contractors who have fully understood the system and feel comfortable about it can survive and succeed in tendering for construction contracts and BOT projects in China. It is also important for foreign investors to know that China has introduced some innovations in awarding BOT projects since the end of 1996, when the concession of the first state-approved BOT project, the Laibin B, was made. This paper has discussed the tendering system in China, some innovations in awarding BOT projects, and especially the evaluation and competitive tendering of BOT projects through a detailed study of Laibin B. The following are some of the main lessons drawn:

- The key innovations are that (1) China has begun to formally adopt the BOT scheme together with international custom and practice to develop basic infrastructure; (2) developers will be awarded contracts only after an open, competitive tender process; (3) the foreign consortium will be able to own 100% of the operating company; (4) successful tenderers will have to finance their projects from a revenue stream based on letters of comfort from the provincial government supporting off-take agreements instead of the guaranteed returns that have characterized many projects in China; and (5) the electricity tariffs are fixed, with pass-through of fuel cost and foreign-exchange fluctuation.
- China has simplified the approval procedure for foreign-invested projects and tends to adopt international custom and practice for the BOT projects. For example, China is trying to formulate some model forms of project documents for various types of infrastructure projects through

Operating Year (1)	Operating Tariff for Minimum Net Electrical Output <sup>3</sup>		Operating Tariff for Additional Net Electrical Output
	US\$ denominated part <sup>1</sup> (US\$/KWh) (2)	RMB denominated part <sup>2</sup> (RMB/KWh) (3)	Only denominated in RMB <sup>4</sup> (RMB/KWh) (4)
From Completion Date of Unit 1 until Commencement of Commercial Operations			Not Applicable
1			
2			
3			
...			
13			
14			
15			

Note:

1. The part of the Operating Tariff for Minimum Net Electrical Output that is denominated in US Dollars and shall be paid in RMB yuan;
2. The part of Operating Tariff for Minimum Net Electrical Output that is denominated in RMB yuan and shall be paid in RMB yuan;
3. The Operating Tariff for Minimum Net Electrical Output shall be the sum of the US Dollar denominated part and the RMB denominated part;
4. The part of the Operating Tariff for Additional Net Electrical Output that is denominated in RMB yuan and shall be paid in RMB yuan;
5. The Operating Tariff in the above table is net of all present and future (whether national or local VAT or similar taxes imposed on the sale of Net Electrical Output under the Concession Agreement.

FIG. 3. Tariff Form for Laibin B Project

some selected pilot BOT projects. To help in doing so, China has gone to the extent of hiring foreign advisers in preparing some of these documents. Laibin B, the pilot BOT project in China, has become a good model for future BOT projects, especially the power projects in China. For example, its documents will most likely be used for other power plants, where more fine-tuning can be expected.

- Critical factors for a potential foreign tenderer to win a BOT power project in China include (1) low tariff levels, which require the tenderer to propose a sound financial package and obtain the support from the tenderer's government for tendering an infrastructure project, especially a power plant project, where investment is huge. For the Laibin B case, the French government is closely linked with the French companies and the project has the backing of Coface—a semigovernmental French export credit guarantee company owned by the French government, banks, and insurance companies. It is suggested in some quarters that France's determination to win the "model" Laibin B in China would enable the French government and business groups to use it as a leverage for other such contracts in China; (2) fewer guarantees and incentives required from the local government; (3) the tenderer's good reputation, experience, and strength; and (4) familiarity with Chinese business procedure and practice, and a good relationship with local government. The ability to cooperate and coordinate with Chinese authorities to expedite project approvals is immensely valuable (personal communication, 1997; Tiong 1996).

- A foreign investor/contractor who wishes to procure projects in China should first pass through the required pre-qualification. More specifically, the contractor should apply to obtain the qualifications certification from various Chinese authorities.
- The introduction of competitive bidding for the equity stake in a project is a new development that will help to provide sound commercial incentives to project developers to build projects quickly and efficiently and also to operate them efficiently. Enhanced performance will lead to enhanced returns to the equity investors. The focus of project appraisal will therefore shift from the rate of return to the price of the end product (Hsu 1996).

From a sovereign's point of view, a small crowd of foreign developers stepping all over each other to provide the lowest price is appealing. But for potential sponsors and their bankers, the process is costly and only occasionally rewarding. Most would prefer the negotiated route so familiar to those already doing business in China. Also, most tenderers are still looking for the kind of performance guarantees they have come to expect in China.

China had been guaranteeing a specific rate of return on projects, but the World Bank has tried to convince China that this approach benefits neither the consumer (country) nor the supplier. In contrast, if the promoter of a power plant is working toward achieving or bettering an agreed maximum price under a power-purchase agreement, there is reason to get the thing done quickly at the lowest possible cost and operate the plant efficiently. Both sides should be better off (Orr 1997).



- Foreign ownership is perhaps the most controversial element of the new regulations in Laibin B. Until 1996, foreign participants entered most infrastructure projects through joint-venture agreements. The laws in this area are well tested after more than 20 years of experience. This is the legal regime under which foreign direct investment has poured into the country's manufacturing sector since the 1980s. In the power sector, however, 100% ownership could be a mixed blessing. It enables the Consortium to have more control over the project and to operate better than foreseen. However, it will also mean more risks and responsibility. To take care of the regulatory hurdles better, it is advisable for the sponsor to include more Chinese partners. That way, everyone is tied to the same wheel. Yet the combination of foreign ownership and competing tendering are interconnected, notwithstanding that competitive tendering works better on wholly foreign-owned projects. Ultimately, the tendering process should work in favor of foreign investors (Orr 1997).

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