

PPP Workshop: Lessons from Asian Experience

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CHENGDU NO. 6 WATER B PLANT BOT PROJECT, SICHUAN, CHINA

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GENERAL INFORMATION AND OBJECTIVES



General Information

- Chengdu, the capital of Sichuan province, is located in the central area of Sichuan province. The urban area was 92.2 square kilometers and a population of 11.1128 million at the end of 2008.
- Chengdu B Plant main project includes 800,000 m³/day water sourcing engineering, 400,000 m³/day water supply plant and 27km water pipeline with DN 2.4m.

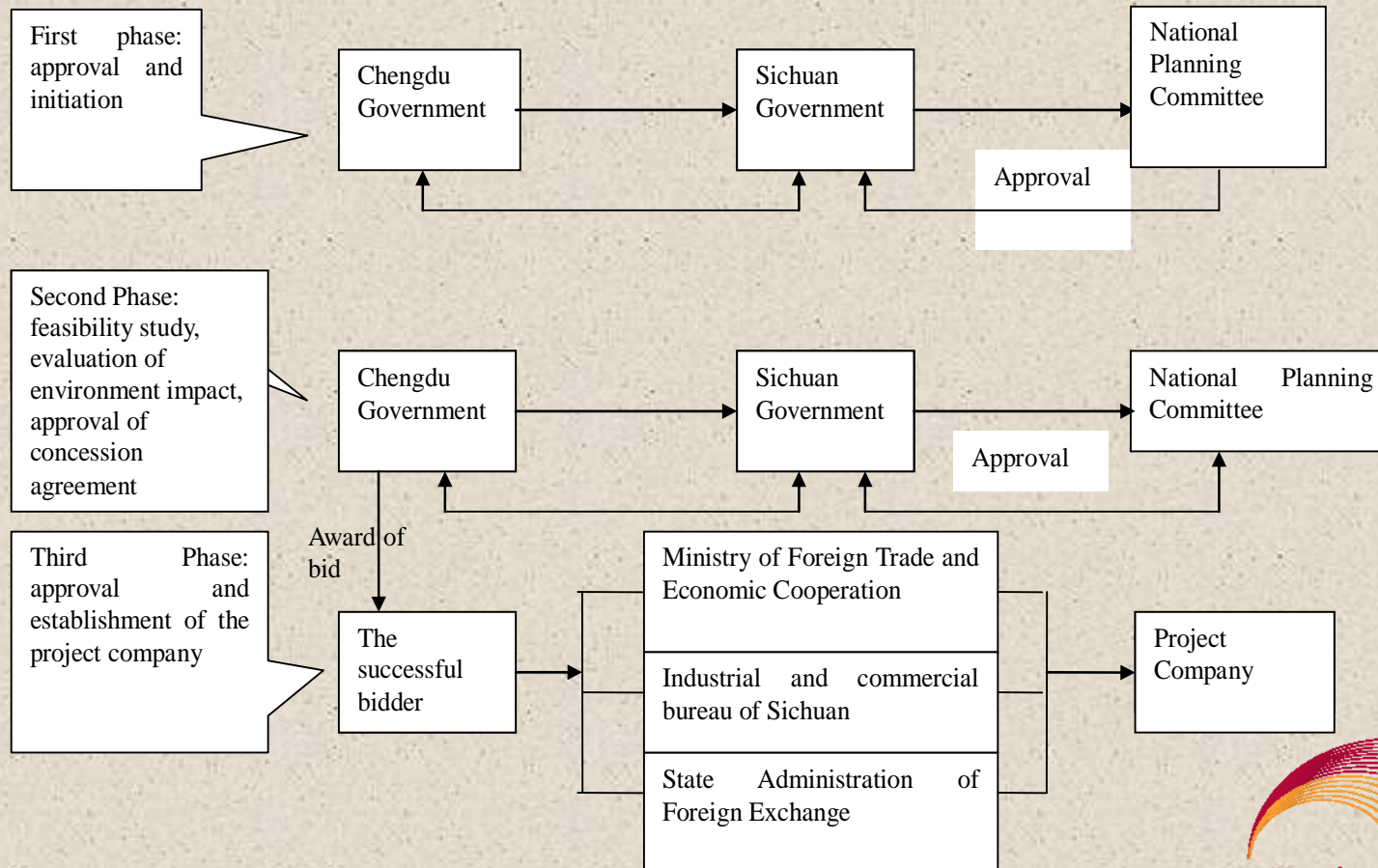
Basic information

1	Project Name	Urban Water Supply Project, Chengdu, Sichuan
2	The population and area served by the project	The pure water was distributed to the Chengdu Municipal Waterworks General Company
3	Date of signature	August 11, 1999
4	Date of effect	August, 1999
5	The concession period	15 years
6	The area of land involved and the transferring method	Land allocated by the Government only for project use
7	Water treatment capacity	400,000 m ³ /day
8	Designed capacity	460,000 m ³ /day

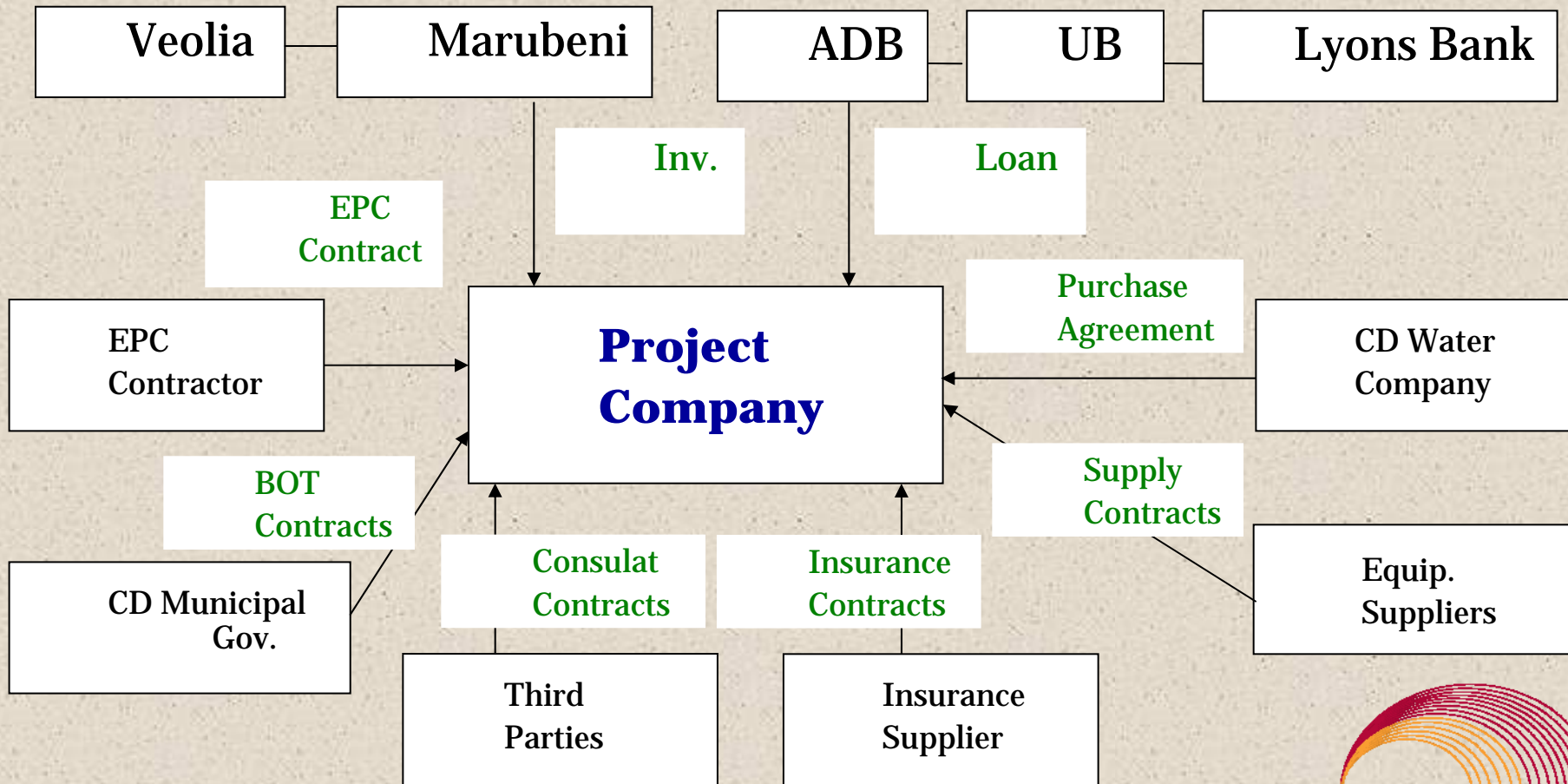
Basic information

9	The number of staff	17 operators, 9 maintainers, 3 analysts and 3 managers
10	Supervisory management agency by	The Water Authority of Chengdu
11	Investors and shares	Veolia: 60% Marubeni: 40%
12	Project company	Chengdu-Veolia (General Water)- Marubeni Co. Ltd
13	The registered capital of the project company	32 million USD
14	Investment ratio	Capital investment: 30% Financing: 70% (mainly from Asia Development Bank, Europe Investment Bank and Credit Lyonnais)
15	Local water rate	2 CNY/m ³ including water charge of 1.35 RMB and sewage treatment fee of 0.65 CNY
16	Water quality supervision	Chengdu Water Supply Corporation

Project Setting Up and Approval Procedures



Project Organization



Major Objectives

- In the early 1990s, the economy of Chengdu developed rapidly and water consumption increased sharply.
- In January 1997, the former National Planning Commission approved the fourth phase of No. 6 Water Plant (Chengdu No. 6 Water B Plant Project) to be built in BOT mode. It became the first BOT project in China.
 - (a) Of the determination and quick action of Chengdu Government;
 - (b) The water source was guaranteed and technology applied is simple and clear;
 - (c) Water tariff reform based on market economy started at that time, based on which the Water tariff could reflect the cost in principal, thus setting the condition for operating the project according to the rule of market-economy.

Features

- Project company established by Veolia and Marubeni , which bring in advanced technology and management experience.
- B Plant Project, with steady cash flow and low risk. With the operational cost and total investment was reduced, the investment return was good.

Financing

The core financial structure of B Plant Project :

1. Firstly, take-or-pay financial arrangement which guaranteed by local government .
2. Secondly, loan agreements between the project company and financial institutions as follows: Capital stock share:30%; Loan by ADB:45% and UB:25%. Loan period: 12.5-15.5 years

Exclusive rights in Concession Agreement

Exclusive rights granted by Chengdu Government during the concession period include:

1. The Concession Right
2. The Right of Selling the Treated Water
3. Land Use Rights and Security of Granted Land Rights
4. The Right of Raw Water Obtainment
5. The Right of Water Tariff Collection
6. The Right of Foreign Currency Exchange

All the abovementioned rights were secured through risk-sharing and a series of mechanisms, which were incorporated into the concession agreement.

Settlement of Disputes

Project follows the procedure below for dispute settlement:

1. Friendly resolution through the Committee of Operation and Coordination
2. Mediation through a panel of experts
3. Recognized arbitrary procedures (the final resolution in accordance with the Arbitration Rules of the China International Economic and Trade Arbitration Commission, Chinese arbitration law and the clause of the arbitration agreement)

PUBLIC BIDDING



Bidding Procedure

B Plant Project adopted a competitive bidding process.

Bidding procedure included: preparing the bid documents, evaluating the winning candidates, negotiation and confirming the winning bidder.



The Main Content of CA in Bidding Doc.

The main content of the concession agreement includes:

- Grant of Concession
- Concession Period
- Performance Bond and Maintenance Bond
- Use of Land
- Treated Water Purchase
- Raw Water Supply
- Water Rate
- Foreign Currency
- The transfer of the project
- The settlement of disputes
- Risk Sharing

The above are the core and the most fundamental parts of the whole bid documents, which determine the success of the project.

There are 7 bidding candidates company purchase the bidding document and 5 made quotation to Chengdu Municipal Government after 5 months preparation.

The Evaluation and Negotiation

The Pre-Qualification

The National Planning Commission, Ministry of Construction, the provincial planning commission of Sichuan and Chengdu Government examine and evaluate the project experience, the experience of the construction and operation of urban water supply project as well as the financial capability and so forth of each applicant.

The Evaluation

Bid evaluation started on February 27, 1998, divided into two phases:

The first phase: the pre-evaluation.

The second phase: the committee would rank the bidders based on the report and bid documents.

The committee of the bid evaluation ranked the consortium of French company General Water, the consortium of Malaysian George, Japanese company Mitsubishi Electric.

Negotiation : Since April 27, 1998, Chengdu Government held three rounds of negotiations in Beijing and Chengdu, respectively, with the consortium of French company General Water

Costs of Transaction

- Time Factor: Negotiations of BOT projects will usually last from 1-2 years up to 5-6 years according to project scale.
- Cost Factor: The cost for concluding the B Plant Project was about 8 million USD, about 8% of the overall investment.

Experiences from the Bidding Process and Key Points of Bidding Process

- Experiences from the Bidding Process

1. The content, principle and methods of the bid evaluation and the percentage of each part should be set forth in advance
2. Suitable evaluation ratio for the quotation tariff
3. Ranking of bidders was required

Key Points of Bidding Process

1. Support and Facilitation of the Central and Local Government
2. Openness and Transparency
3. Experience and Quality of Government Advisors
4. Fixed Water Tariff with Flexible Investment Return
5. Concession Agreement

DESIGN, CONSTRUCTION AND TEST-RUN



EPC Contract Applied in BOT Projects

1. EPC was successfully applied in B Plant Project which proves that such approach is applicable to BOT projects.
2. During the preparatory period, the investors selected contractors for civil engineering, installation, pipeline engineering and pipeline installation.
3. All the contractors participated in the preliminary design and bidding, and will sign EPC with project company after winning the bid.

Cost Control

The construction cost of B Plant Project is well controlled within budget because of the following reasons:

1. First of all, pre-engagement of the contractors before bidding, which enables the construction cost to be under well control;
2. Second, the full engagement in the preliminary study, initial and final design, which allows the contractors to have comprehensive understanding and consideration of the construction;
3. Third, high standard management skills and experience of the project company;
4. Last but not least, the full support and facilitation of the local Government.

Construction Schedule Early Completion

- B Plant construction period early completion, the follows are key points:
 1. Selection of Contractors
 - Major contractors have rich experience, high-level management and good coordination with each other and the government and thus can complete the project with a high efficiency
 2. Strong Support of Government
 - Chengdu Government for its proactive facilitation to help remove obstacles, the construction goes on smoothly.
 3. Management Capacity of Project Company
 - Business experience and good management capacity of French company Veolia and Japanese company Marubeni-Iida Co. Ltd can ensure a smooth and high-quality project.

Implementation of Supervision Procedure ; Testing and Test Run

1. Establishment and Implementation of the Supervision Procedure

–Quality Supervision

Chengdu Construction Engineering Quality Supervision and Examination Station has been designated by Chengdu Government for supervising and examining the quality of the project.

–Review of Design Drawings

The government has organized experts to deliberate and review the design drawings at both of the preliminary design and the engineering design stages according relevant laws and regulations, technical specification and concession agreement to guarantee the quality of the project from designing.

2. Testing and Test Run

–The primary completion certificate, which will be issued only after performance test, gives the approval for commercial operation. After three months, seasonal test and final completion test have been conducted and the final completion notice issued after the test results satisfy the requirements.

Experience and Lessons of Government

Experience and Lessons of Municipal Government of Chengdu

– Experience

- The smooth implementation of the project from design, construction to test run and commercial operation cannot be achieved without the support and guidance of governments and the participation of experienced experts.

– Lessons

- More preliminary work desired
- New technology vs. Existing technical specification
- Pros and cons of bundled investment
- Proper time of land expropriation to be identified

Experience and Lessons of Project Company

Experience and Lessons of the Project Company

– Experience

- Adopting new technology
- Control over construction investment

– Lessons

- On-site survey and research at the primary stage of design and construction should be more specified

OPERATION AND MAINTENANCE



The Actual Operation Situation

- B Plant Project has been under good operation and maintenance, which gains recognition from the government, society, investors and the lender.
- The earnings of the B Plant Project are slightly higher than estimate because of the following reasons:
 - Reasonable Design and Construction
 - Reasonable Financial Model and Risk Management and Control

The Efficient Management of Personnel and Auxiliary Facilities

The B Plant Project has only 32 employees.

The training programmers implemented to all B Plant employees.

In addition to the abovementioned reasons, above-estimate profitability should also attribute to the credibility of Chengdu Government and such risk-sharing provisions in the concession agreement as those related to water tariff and its fluctuation, foreign exchange rate and the exchangeability, force majeure, financing, expropriation.

Technical Reliability

So far no major technical default affecting the capacity of water supply has occurred. On the contrary, thanks to the reliable design, the B Plant is capable of balancing water supply to meet the peak demand.

The Payment Mechanism

The B Plant Project is economically viable and developing in a healthy manner because of an efficient and feasible payment mechanism composed of the following facets:

- Water tariff is paid to project company by Chengdu Water Supply Corporation, instead of being directly collected from end users by the former.
- The financial capacity and credibility of the payer together with government guarantee has, to certain extent, reduced the risk of the project company.
- The principle of take-or-pay provided in the concession agreement sets the legal obligation of the Chengdu Water Supply Corporation to pay accordingly.



Financial Management

The Project has been financially well managed to avoid fund shortage and refinancing for the following reasons:

- There are specific provisions about project financing and financial arrangement in concession agreement.
- Chengdu Government has imposed strong supervision over the finance of the company.
- The company has a proper financial establishment and sound financial system, which enable an effective management and strong cost control during the construction and operation.

The Adjustment of Water Tariff

The water tariff of each and every year during the operation of B Plant Project has been clearly stipulated in the concession agreement: the tariff will rather be affected by exchange rate under certain conditions than by inflation.

Maintenance Plan

- The maintenance of the water plant and its facilities is to ensure
 - constant water supply; and
 - smooth transfer after the termination of the concession.
- The plant has been well maintained for the following reasons:
 - Detailed maintenance plan provided in the concession agreement;
 - Professional maintenance techniques and equipment maintenance manuals;
 - Long-term staff training mechanism.

Experience of the Project Operation and Maintenance

- Strengthened governmental supervision and control
- Strict operational procedures
- Regular training of professional maintenance personnel

GOVERNMENT SUPPORT



Government Undertaking Contractual Obligations

As one party of the concession agreement, Chengdu Government has undertaken the obligations of restricting competition, land use, taxation, foreign exchange and sovereign immunity and at the same time supported the project by providing access to the work site as well as public facility services.

Government Undertaking Contractual Obligations

1. Land Use Rights
2. Access to Project Site
3. Public Facility Services
4. Support and Facilitate to Acquire Licenses of Construction, Operation, Import and Export from Central and Provincial Governments
5. Guarantee for Payment and Performance by Public Utilities
6. Exemption from Such Laws and Regulations as Taxation, Employment Control and Registration.
 - Preferential Taxation
 - Facilitation in Employment and Registration Affairs
7. Protective Measures against Negative Impact of New Laws or Change of the Existing Law
8. Foreign Exchange Protection
9. Others

The Experience and Lessons regarding Government Support

- Government support is critical to infrastructure projects in BOT format. For B Plant Project, the attitude and support of Chengdu Government is greatly important to and directly affects its success. The experience of the Project includes:

- Full support from the Government;
- Explicit provision of the Government's responsibilities in agreement.

- The agreement stipulates all government support as terms of obligations, which is conducive both to the investors and the government and local people in terms of maintaining social stability, avoiding uncertainty and ensuring the success of the project.

CONCLUSION: A BRIEF OF EXPERIENCES AND LESSONS



Are the Objectives Reached so far?

1. All the set targets by Chengdu Government, i.e. introducing advanced technology and supplying drinking water to 3.2 million residents, have been basically reached.
2. Since 2002 when the project company started operation, no major defaults have occurred and water supply has been well balanced to meet the peak demand.
3. Mobilize private capital to assist in the country's infrastructure development, and increase water supply to meet the increased demands of a growing economy.
4. In general, ADB's active involvement in the Project from conception was critical to ensure the financial closure and proper implementation of the Project.

Main Problems during the Preparation, Bidding, Construction, Operation and Maintenance of the Project

1. Preparation and Procurement

- Consensus on the project to be reached among government officials
- The Standard of the Technical Proposal of the Bid Document to be Set in Advance

2. Construction, Operation and Maintenance

○ Construction

Issues involving other infrastructures, such as roads, pipeline as well as irrigation system

Issues involving construction schedule and the preservation of cultural relics

○ Operation and Maintenance

Outside sewage discharge issues

3. Pros and Cons of Bundled Investment

4. Main Project Issues and Lessons

- The importance of the government financial support
- The concession period should be considered
- The necessity of the reasonable Debt-to-Equity

Are Private Investors Satisfied with the Support of Public Institutions?

1. The success of BOT projects cannot be achieved without political stability of the residing country, the dire needs of the government and the public, as well as the credibility and support of the government.
2. Based on facts, analysis and feedback, investors of the B Plant Project are generally satisfied with the support of public institutions and the government.