國際合約實務－以臺灣高鐵建案為例

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International Contract Practices

Lesson Learned from the Taiwan High Speed Rail Project

1. Concession Rights (Franchise) :

1.1 Construction and Operation Agreement (C&OA) – THSRC and MOTC (23rd July 1998)

- Fundamental document

- THSRC to finance, design, construct, operate and then transfer the Taiwan High Speed Rail Project (BOT)

1.2 Station Areas Development Agreement – THSRC and MOTC (23rd July 1998) – Property Development separately from C&OA

1.3 The first is to construct and to operate the HSR Project, including the stations, over 35 years. The second is the development and utilisation of commercial areas adjacent to five of the new Stations (Taoyuan, Hsinchu, Taichung, Chaiyi, and Tainan) for a period of 50 years.

2. Financing Arrangements

2.1 First Syndicated Credit Facility Agreement – THSRC and 25 Syndicated Banks (the Lender) (2nd February 2000)

a. Provide credits at a total amount of NT$323.3 billions

b. From the following sources:

(a) Government

(b) Pension fund of public officials

(c) Pension fund of labors

(d) Labor insurance fund

(e) Banks

c. Setting up the conditions precedent to the drawdown as well as the time limit to complete the drawdown (5 years and 6 months from the first drawdown)

d. THSRC is required to meet the schedule of equity subscription.

e. Matters regarding construction contracts

(a) Contractor is required to waive statutory lien

(b) Assignment of THSRC's rights to the Lender.

(e) Other undertaking (no termination of construction contract without Lender's agreement)

(d) Matters on which the Lender must be informed (suspension and increase of contract price)

f. Appointment of the Lender's Engineer

2.2 Construction Consultancy Agreement – Lender and CECI

(the Lender's Engineer)

a. As an engineering consultant for the Lender

b. To review construction related document and records

c. Advise on construction and insurance issues

d. Carry out site inspection

2.3 Tripartite Agreement – MOTC, Lender and THSRC (2nd February 2000)

a. To protect the interests of the Lender

b. MOTC to agree that THSRC can create security interests on its assets for the interest of the Lender

c. MOTC to agree that THSRC can assign its monetary rights under C&OA to the Lender

d. Appointment of the Professional Institute

2.4 Professional Institute Agreement – Lender and CECI (the Professional Institute)

a. As a Professional Institute for the Lender

b. Assess the “temporary values” of HSR Project as progressively completed and provide periodic reports

c. The “temporary values” as assessed will be used to support payment by the Lender under the Credit Facility Agreement

3. Quality Assurance

3.1 Numerous Checks

a. Contractor

(a) Internal checks

(b) External checks – CICE and Designer

b. THSRC – Quality Assurance Organization

c. ICE/ISE and IV&V

d. BOHSR

e. Lender’s Engineer and Insurers

3.2 Independent Checking Engineer (ICE) and Independent Site Engineer (ISE) – THSRC and International Railway Engineering Group (6th September 1999)

a. Independent quality auditor for quality assurance

b. Assure quality processes, procedures and products in

(a) Technical and functional design
(b) Construction and installation
(c) Manufacturing, testing commissioning
(d) Reliability, maintainability and safety
(e) THSRC project management

3.3 Independent Verification and Validation (IV&V) – THSRC and Lloyd's Register Project Team（21st July 2000）

a. C&OA requirement

b. Must be an independent and impartial institution, approved by MOTC

c. Conduct and submit reports and provide documentary evidence on the results of the checks, examination and validation to Government, the Lenders and THSRC

d. Ensure the operating railway meets the total quality system requirements for operation, maintenance, health and safety

4. Insurance Arrangement

4.1 Owner Controlled Insurance Programme (OCIP) – THSRC and Insurers/Re-insurers

- covers THSRC, Contractors, Sub-contractors and Manufacturers and Suppliers

4.2 Insurance Consultancy – THSRC and Insurance Broker

4.3 Contractor's own insurance arrangement

4.4 Also check on the quality

5. Construction Contracts:

5.1 12 Civil Works Contracts for mainline (2000 and 2001)

a. Design and Build Contract as opposing to the traditional Design-Bid-Build Contract

(a) FIDIC – EPC/Turnkey Project

(b) ICE – Design and Build

b. A different form of project delivery.

c. It offers more flexible and autonomy to the Contractor

d. Time and cost saving

e. The most significant advantage of D-B is the opportunity it presents to Fast Track a project by overlapping design and construction stages.

f. Requiring more sophisticated approach by the Contractor and Employer

g. Major Contract Elements

(a) Contractor (JV) to be Jointly and Severally liable

(b) Lump Sum Fixed Price

(c) Performance Bond

(d) Retention Money

(e) Most responsibility on Contractor

(f) Limited Entitlement to Extensions of Time and Additional Cost

(g) Milestone Linked Payments

(h) Employer's Conciliation Rules

(i) ROC Law and ROC Arbitration Rule

5.2 Core System Contracts (12th December 2000)

a. On-shore and Off-shore Contracts

b. Taiwan Shinkansen Corporation (TSC) and Taiwan Shinkansen International Engineering Corporation (TSIEC).

c. TSC/TSIEC were formed by a consortium comprising Kawasaki Heavy Industries, Ltd., Toshiba Corporation, Mitsubishi Heavy Industries Ltd., Mitsubishi Corporation, Sumitomo Corporation, Mitsui Company Ltd. and Marubeni Corporation.

d. All operations of the new Taiwan High Speed Rail (HSR) are controlled by Japan Shinkansen technology.

e. State-of-the-art system integrates all major electrical and mechanical subsystems required for Taiwan High Speed Rail

f. Ensuring a smooth and efficient design and installation programme and avoiding integration risks by combining all subsystems into a single contract with the Contractor guaranteeing the safe operations of the HSR. All components are designed to the highest safety and fire standards.

g. The Core System of the Taiwan HSR comprises the following major subsystems：

- Rolling Stock (Trainsets) and Driver Training Simulator
- Signaling System
- Electrification System (Power Supply System/ Overhead Catenary System)
- Communication System
- Wayside E&M System
- Maintenance Management Information System

h. TSC, as the Turnkey supplier of the Core System, will interface with all Interfacing Parties (e.g. Civil Contractors, Station Contractors, Government Authorities) to integrate the Core System requirements into all designs of the Interfacing Parties. TSC is also responsible for the Testing and Commissioning of the HSR Core System.

i. A Maintenance Services Contract was awarded to TSMSC for the development and implementation of a maintenance concept of the HSR.

j. Major Contract Elements:

(a) Notice to Proceed

(b) Turnkey Contract

(c) Milestone Payment/Title Transferred upon Payment

(d) Parent Company Guarantee

(e) Advance Payment and Standby Letter of Credit

(f) Retention Money

(e) Employer’s Conciliation Rule

(f) New York Law and Singapore Arbitration Rules

5.3 Trackwork Contracts (2002 and 2003)

a. The majority of the Main Line trackwork comprises slab tracks (TK1+000 to TK343+103), with the final 3km ballasted track (TK343+103 to TK346+374).

b. The double track main line is standard gauge at 4.5m centers with the normal direction of operation using the left-hand track. At intermediate stations, crossover tracks will be provided in the vicinity of the stations and additionally at two other locations, approximately TK 130 and TK 278 to permit bi-directional operation.

c. The route length of the Main Line track is approximately 345km. Approximately 73% of the route will be carried on viaducts and bridges, 18% in tunnels, and 9% in cuttings, or on embankment at grade.

d. The design speed of the trackwork and civil engineering structures is 350km/h to allow for future development, but the track superelevation on curves will be set for a maximum of 300km/h running. Speed limits will apply in other locations such as at turnouts on the approach to intermediate stations.

e. The 65km of Test Track in the south completed earlier.

f. Contract T200 awarded to Taiwan Track Partners JV and Contracts T210, T220, T230 and T240 all awarded to Taiwan Shinkansen Trackwork JV.

g. Design and Build Contract

h. Tripartite Agreement

(a) Core Contracts and Trackwork Contracts T230 and T240

(b) Design and Manufacture, by each Contract separately

(c) Installation, Testing/Commissioning, a combined programme for all Contracts and only one integrated programme is required.

5.4 Stations and Depots Contracts (2002 and 2003)

a. High Speed Rail (HSR) Stations are built at 8 locations. Taipei, Panchiao, Taoyuan, Hsinchu, Taichung, Chiayi, Tainan, Tsoying. Three New Stations (Miaoli, Changhua, and Yunlin Stations) are being built now.

b. One of the major concessions is the development and utilisation of commercial areas adjacent to five of the Stations (Taoyuan, Hsinchu, Taichung, Chaiyi, and Tainan) for a period of 50 years.

c. A main workshop and five depots will provide maintenance service and support for the THSR. For “Revenue Service” at this stage in time, Yenchao Main Workshop, Tsoying Depot, Wujih Depot and Liuchia Depot be operational.

d. Design – Bid – Build Contract. Otherwise the form of Contract adopted the template of the Civil Work Contract with necessary adjustment.

Reflection

高鐵興建成功的七個重要決定：

一、BOT計畫

二、政府零出資

三、採用日本新幹線技術 (40年的經驗，自1964年10月1日)

四、引進國際工程及計畫管理團隊

五、 Design and Build Contract Used for Civil Works Construction

六、實質完工(Substantial Completion)履約實務的援用

七、業主調解規則的採用

Recommendation

1. 良好的採購管理
2. 良好的合約管理
3. 建立由當事人間自行解決爭議之合約機制

Thank You

Questions and Answers