



International EPC Contract: contract scheme , stages and practical points

國際統包工程(EPC)契約及架構之介紹

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A .What is an EPC Contract?

- An EPC contract contains provisions describing all responsibilities and guarantees associated with the built facility's plant performance, project schedule, plant warranty, and project completion.

- 政府採購法
- → 基於效率及品質要求，得以統包辦理招標，
- → 指工程或財物採購中之設計與施工、供應、安裝或一定期間之維修等併於同一採購契約辦理招標。(政府採購法第24條)
- → 於工程採購之統包，係指含細部設計及施工，並得包含基本設計、測試、訓練、一定期間之維修或營運等事項。(統包實施辦法)
- → 於財物採購之統包，係含細部設計，供應及安裝，並得包含基本設計、測試、訓練，一定期間之維修或營運等事項。(統包實施辦法)



Project Delivery Method

- Design-Bid-Build
- Design-Build
- EPC (Turnkey)
- Construction Management
- DBO
- BOT



Pricing of Contract

- Lump Sum
- Cost Reimbursement
- Unit Price
- Hybrid



Characteristics of EPC Contract

- Lump-Sum Based
- Project Financing Concerns
- Fast-tracking
- Value Engineering
- Cost of Risk



Issues in Lump-Sum EPC

- Scope of Work
- Express scope of works
- Implied scope of works



- PMC's Role
- Price Adjustments
- Extension of Time
- Employer Responsibility
- Time limitation on acceptance



- Provision of drawings, documents and design data listed in the Specifications
- No responsibility for errors or discrepancies in drawings and documents, except specified circumstances
- Assistance in obtaining government permits
- Provision of access to site



- Contractor's Responsibilities
- Contractor's undertaking
- Taxes, levies & duties included in pricing
- Trade secrets
- Commencement within X days of EDC



- International professional standards of skills, care and diligence
- Site safety & public safety
- Other obligations



- Contractor's representations
- Independent Contractor
- One who is hired to undertake a specific project but who is left free to do the assigned work and to choose the method for accomplishing it.
- One who commits a wrong while carrying out the work does not create liability to the employer.



- Definition of Completion
- Defects Liability
- Liability/ Indemnification
- Cumulative liabilities/damages and LD
- Exclude:
 - any and all liability to make good of the work and complete the plant
 - any and all liability arising from intellectual infringement/Torts
 - gross negligence and/or willful misconduct of the EPC contractor



1999 FIDIC Series

- FIDIC Contract Documents
 - General Conditions
 - Particular Conditions
 - Tendering, Contract Form, DAB
- 1999 Series
 - 1999 Red Book (Construction Only)
 - 1999 Yellow Book (Design-Build)
 - 1999 Silver Book (EPC)
 - 1999 Green Book (Simple Construction)



Structure of EPC Contract

- Part I: Form of Contract
- Part II: General Conditions of Contract
- Part III: Particular Conditions of XXX Project
- Part IV: Technical Requirements
- Part V: Contract Price, BOQ and Unit Price
- Part VI: Exhibits



國際統包契約之締約程序

- There are many contracts and agreements need to be signed from the tender/bidding stage to the award the contract



Planning Stage:

- Owner: Feasibility Study (FS)
- Technical
- Commercial
- Consultancy agreement



Tender (open tender/ invitation) Stage:

- Owner:
- Select Licensor (know how/ process design process)
- Prepare bidding document
- Pre-qualification (PQ) document
- Contractor provide technical criteria, experiences, financial information
- Review by owner or consultant
- Licensor agreements and PCM contract



- Shortlist
- Issue Invitation to bidder and Non-disclosure Agreement
 - Project basic information and concept
 - Specifications: Standards and requirements
 - Schedule
 - Terms and conditions
 - Commercial terms



Bidding Stage:

- EPC Contractor prepare proposal (Basic)
- Cost estimation: Major Material (concrete, steel, piping, cable)
- Bid shopping: Vendors and subcontractors
- Pre-bid agreement signed between EPC contractor and Vendors and subcontractors



- EPC Contractor's Proposal contains:
- Technical: execution plan, manpower, equipment, construction sequence
- Commercial: price, liability,
- Schedule
- Submit the clarification; point out the deviations
- Clarification is very important for both owner and contractor: make sure the equal basis for SOW, can be done by email/letter or face to face.



- Submit the cost impact for the result of clarification
- Commercial proposal review
- Negotiation (Letter of Intent/Term Sheet/Not binding)
- Novation agreements between Owner, EPC contractor and licensor/ owner's vendors
- Award the contract



EPC contract with Contractor and Supplier

- On shore contract----E & C
- Off shore contract----E & P
- Taxation consideration
- Coordination agreement/ bridging agreement----If two parties
- Consortium VS. Joint Venture : joint and several liability
- Parent company guarantee



Project financing

- Loan agreement----Employer vs. Banks
- EPC contract-----Employer vs. Contractor
- Condition precedent:
 - 1.Financial arrangement Before NTP
 - 2.Down payment vs. Performance Bond
 - 3.Not call bond if no breach



- Direct agreement---Bank vs. EPC contractor (Without prejudice to the rights in the EPC contract)
- Change Scope of Work and material change of the terms and conditions of EPC Contract-----Subject to approval or consent of Bank.
- Contractor's right----assignment---as collateral to bank/ not any third party



- Construction general pledge agreement : owner, bank and EPC contractor (security keeper)
- Assignment agreement: owner and Bank
- Acknowledgment of assignment : EPC contractor and owner
- Contract amendments during the performance of the EPC contract: on shore and off shore contract



C. Conclusion

- Well-prepared
- Select good consultant, contractor and supplier
- Strong financing ability
- Have lawyer at beginning



Thanks



提問與討論