

Risk Allocation and Bankability in Construction Projects

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Introduction



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Ibaad Hakim is an associate in the Construction and Engineering group of White & Case LLP based in the UAE.

His experience includes advising on major, high-end, oil and gas, infrastructure, and power projects, many of which have been project financed. He provides strategic advice and risk analysis on a wide variety of construction procurement arrangements, including traditional, design and build, EPC/turnkey, construction management and collaborative contracting, as well as drafting and negotiation of construction contracts. He also has considerable experience of advising on claims and disputes on construction projects, including on international arbitrations under all forums and rules, litigation, dispute board proceedings and alternative dispute resolution. Ibaad has considerable experience of advising sponsors, government agencies, contractors and consultants on standard form of contracts including FIDIC, NEC, JCT, ICE, IChemE, as well as EPC, BOT/BOOT, PFI contracts, and bespoke agreements relating to a wide range of industries, in many different jurisdictions.

Ibaad is dual-qualified in England and Wales and in Pakistan.

Agenda

- Bankability Considerations
- EPC and EPCM Contracts
- Risk Allocation in EPC Contracts

Bankability Considerations

Objectives in the Construction Process

Owner	Contractor	Lenders
<ul style="list-style-type: none"> • Single point responsibility* 	<ul style="list-style-type: none"> • Regular cash-flow 	<ul style="list-style-type: none"> • Similar to Owner
<ul style="list-style-type: none"> • Completed asset within time (or else delay LDs) 	<ul style="list-style-type: none"> • Limited risks 	<ul style="list-style-type: none"> • Bankability and certainty
<ul style="list-style-type: none"> • Fixed price lump sum* 	<ul style="list-style-type: none"> • Limited liability: LDs and caps 	<ul style="list-style-type: none"> • Minimise uncovered risks
<ul style="list-style-type: none"> • Guaranteed performance & reliability and LDs 	<ul style="list-style-type: none"> • Profit 	<ul style="list-style-type: none"> • Sufficient and accessible performance security to preserve cash-flow
<ul style="list-style-type: none"> • Limited technology risks* 		<ul style="list-style-type: none"> • Enhanced equity support?
<ul style="list-style-type: none"> • Consistency with other project agreements 		<ul style="list-style-type: none"> • Rights to step-in
<ul style="list-style-type: none"> • Performance security 		
<ul style="list-style-type: none"> • Profit 		
<ul style="list-style-type: none"> • Competitive bid v maximum risk transfer 		
<p>* Can depend on market and scale</p>		

Bankability Considerations for Construction Projects

Fixed completion date

Fixed contract price

No, or smallest possible, technology risks

Output and efficiency guarantees

LDs for delay and performance

Highest achievable caps on liability

Limited opportunities for contractor to claim extra time and money

Allocating Risks on Complex Projects



EPC and EPCM Contracts

Key features of EPC Contracts

Certainty

- Cost, schedule and quality

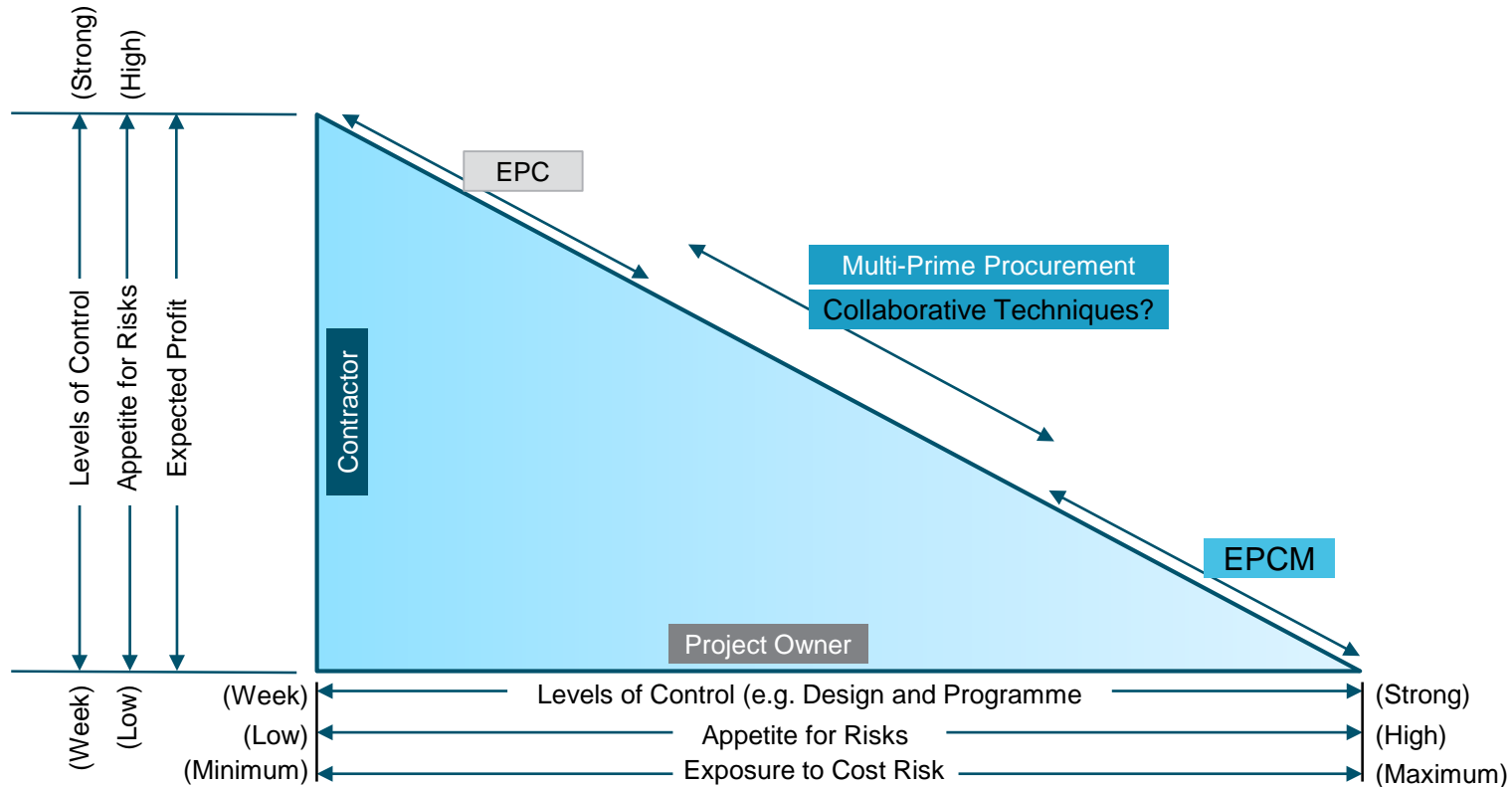
Single point responsibility

- Owner provides output/performance specifications
- Contractor designs, executed, completes, tests and commissions
- Joint and several liability of Contractor is a joint venture

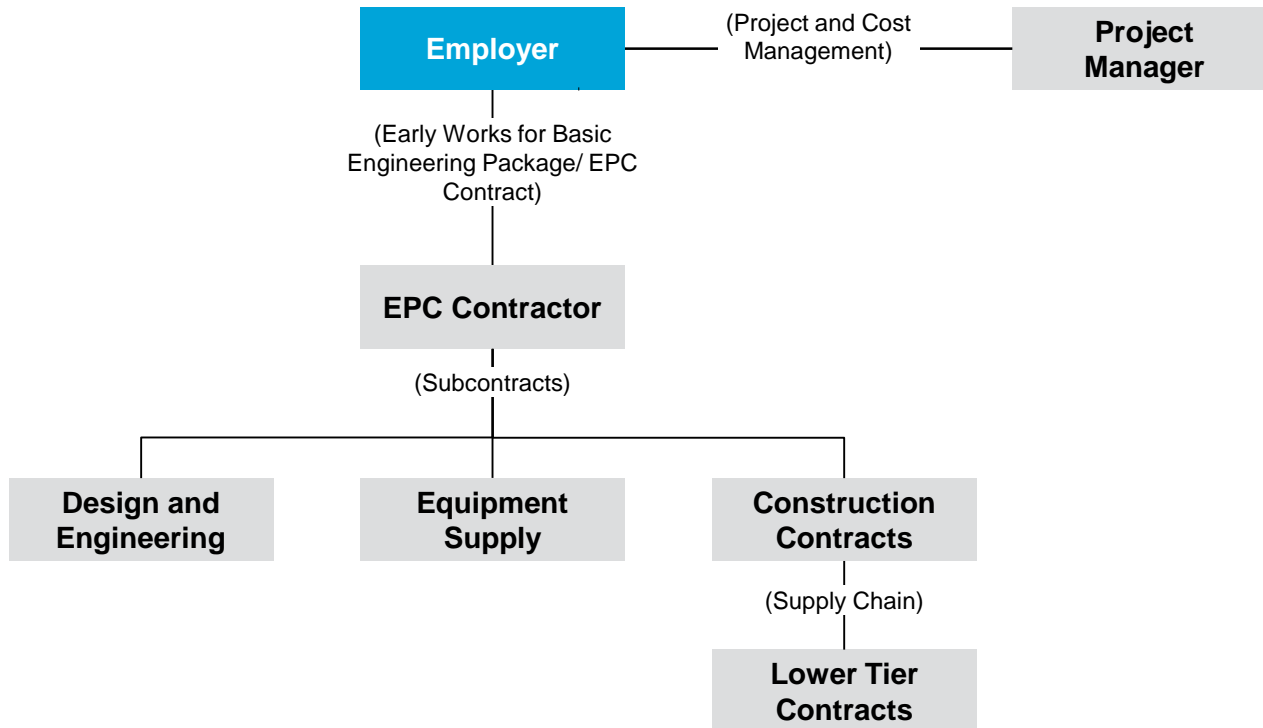
Bankability considerations

- Maximum risk transfer and focus on remedies

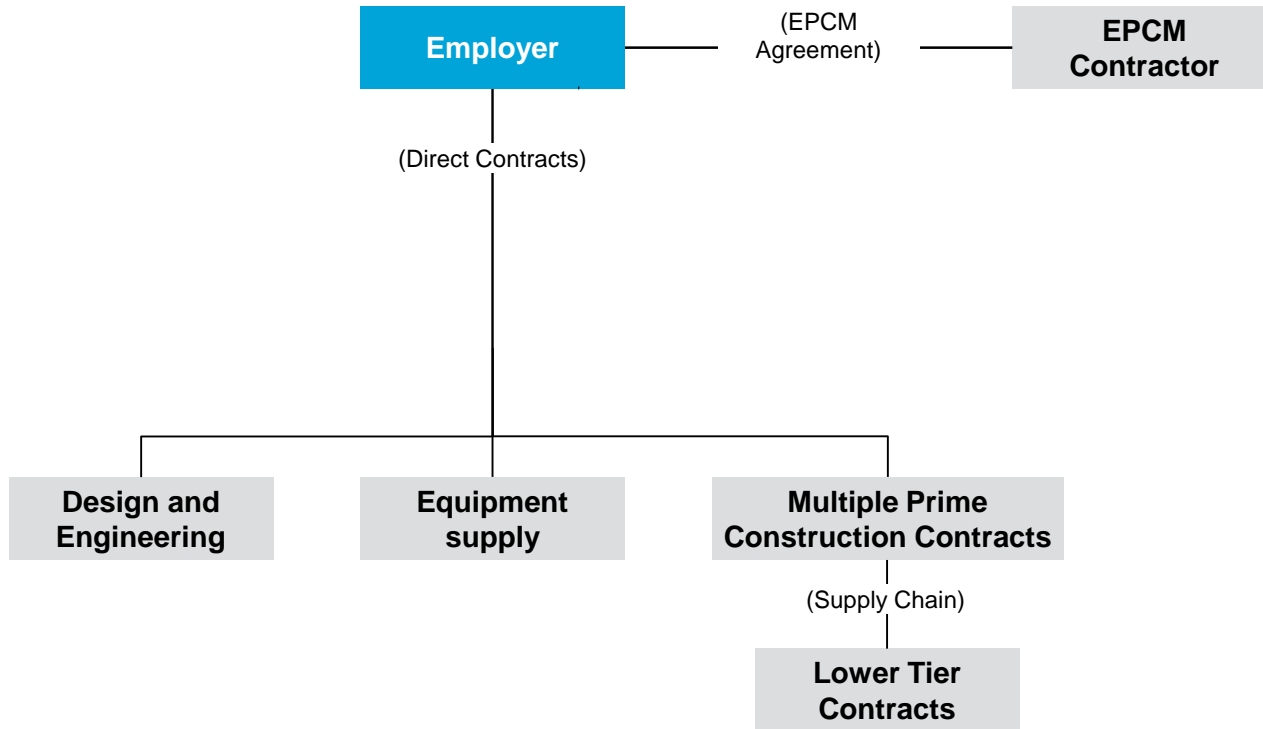
Alternative Contracting Strategies



EPC Contract Structure



EPCM Contract Structure



Key Differences between EPC and EPCM

EPC	EPCM
Single point responsibility	Multi-point responsibility – Owner takes more cost and programme risk
EPC contractor is responsible for engineering, procurement and construction	EPCM contractor is a professional consultant providing construction and possibly design advice, for a fee
EPC contractor may take performance-based turnkey risk	EPCM contractor does not take design and construction risk and performance risk in trade packages
EPC contractor enters into direct contracts with the package contractors	Owner enters into direct contracts with the package contractors
EPC contractor has interface risk	Owner retains interface risk
Reduced administrative burden on Owner	Greater administrative burden on Owner

Risk Allocation in EPC Contracts

EPC Risk Allocation (1)

Site risk

- Including historical objects, services and contamination

Change in law

- Mandatory changes
- Changes in codes of practice

Force Majeure

- Outside control of and unforeseeable by the parties
- Open or closed list of events?

Approvals or permits

- Including imports

Contract documents

- Discrepancies
- Order of priority

EPC Risk Allocation (2)

Developer supplied information

- Errors or omissions
- Remedies for contractor?

Third party design and technology risk

- FEED
- Technology risk

Third party interface risk in major projects

- In particular related infrastructure risk, alignment of testing regime and fuel specifications

Developer default or acts of prevention

- The “prevention principle”

Other Claimable Events

Changes and change control

- Mechanisms to assess time/cost consequences
- Acceleration

Developer instructions

- e.g. stop/start work and searching for defects

Loss or damage to the Works and site materials

- Insured events
- Overlap with force majeure

Consider plant and materials paid for prior to delivery

- Additional insurance may be required

Liquidated Damages (1)

Reasonable assessment of loss resulting from breach

- Proof of loss not required
- But they operate to limit the Contractor's liability

Heads of loss

For delay:

- Debt service
- Expected revenues, less cost of reduced economic life of project (e.g. fixed term PPA) and allowance for sales revenue from testing (sometimes) ignored

For performance:

- Performance shortfall for life of project covering efficiency and output

Delay LDs

- Should complement performance LDs, avoiding overlap and over-compensating the Employer

Performance LDs

- Must reflect the Employer's losses from breach of each performance guarantee (as losses could vary)

Liquidated Damages (2)

Avoid expressing LDs as % of the contract price

- Daily rate versus weekly rate

LDs in operation

- A sole remedy under English law and it is not possible to “top-up”
- Cap on liability

Consequences of invalid liquidated damages under English law

- If infringement of prevention principle, time is at large and associated delay LDs lost
- LDs lost if they are a penalty or void for uncertainty
- However, general damages available subject to burden of proof (resulting in delayed recovery) but may fall foul of exclusions (e.g. exclusive remedies or exclusion of revenue/economic losses)
- Unclear whether general damages can exceed LDs had they been recoverable

Delayed Completion

Discretionary power to grant EOT

- Does not save inadequate EOT mechanism under English law

EOT can be conditional

- Time bar provisions

Sub-cap

- For delay liquidated damages
- Employer's right to terminate if sub-cap reached

Shortfall in Performance

Tests on completion

- Preferable to tests after completion

Types of tests

- Guaranteed and minimum performance levels (including compensation derived from PLDs)

Testing regime

- May be developed or finalised under the EPC contract
- Coordination with commissioning and testing requirements of gas supply agreement

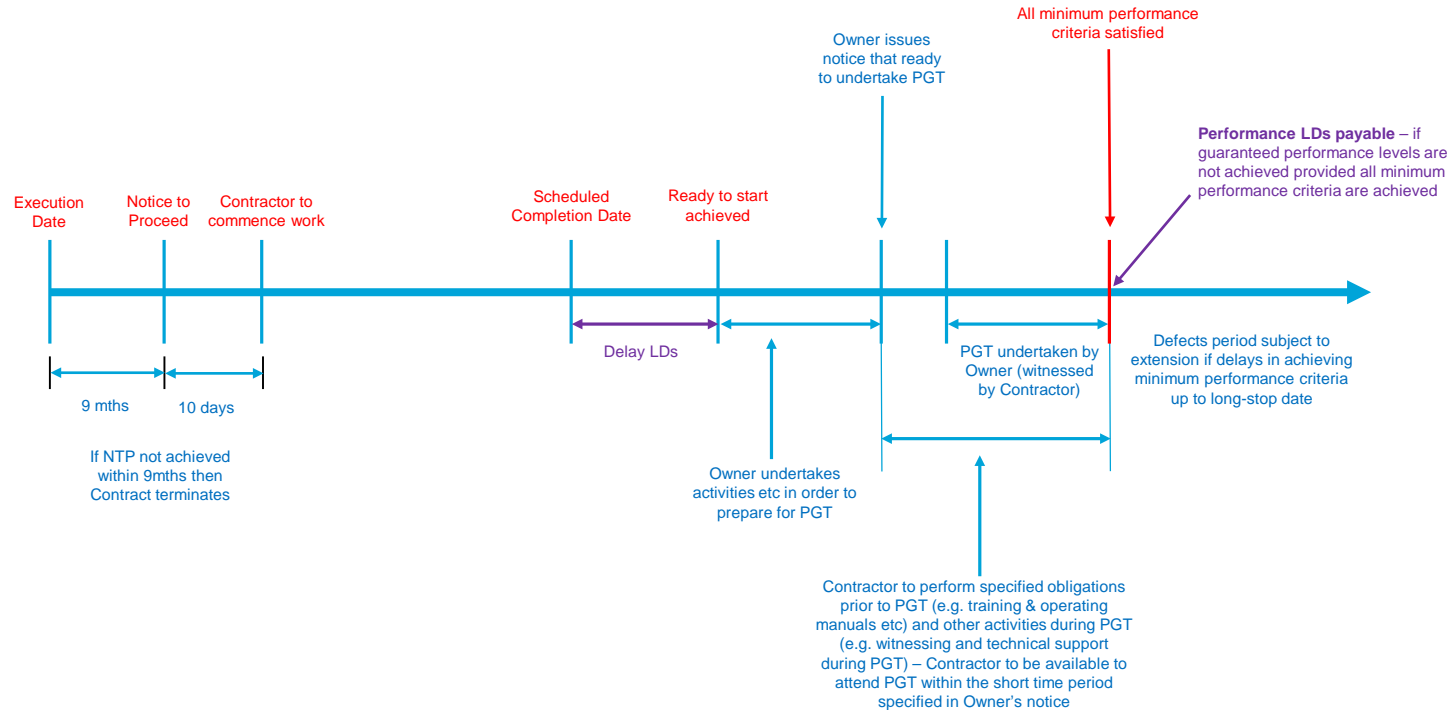
Rejection

- If minimum performance standards not achieved by long stop date

Caps on performance liquidated damages

- May also be linked to cap on delay LDs

Performance Guarantee Tests after Take-over



Completion

Setting the completion date

- Coordination with commencement under other project agreements
- Risk of financial loss under other project contracts if completion is delayed

Completion pre-conditions

- Tests on completion
- Works completed except for snagging
- Provisional O&M documents delivered
- Deemed taking over may challenge bankability analysis

Sectional completion

- Transfer of risk of loss and damages
- Liability for delay LDs
- Expiry of defects liability period(s)

Defects and Remedies after Completion

Defects

- Contractual non-compliance
- Fitness for purpose

End of liability date

- Limitation period under law
- Duration of warranty period
- Latent defects (including in relation to civil engineering works)

Retention bonds

- Cash retention not usually used. 5% bond pre-condition to take over

Life-long remedies

- Include legal liability and third party issues (e.g. confidentiality, IPR infringement, etc)

Limitations and Exclusions of Liability

Aggregate caps are usual

- But levels vary according to sector/size/complexity of project
- Mutual exclusion of consequential losses is also usual

Exceptions

- Wilful default
- Fraud
- Third party indemnities
- Cost of reinstatement
- Damages funded out of insurance
- Tax
- Fines and penalties

Exclusive remedies

- Certainty about potential liabilities for the Contractor
- Risky for the Employer
- Failsafe clause for LDs

Security

Bonds and guarantees

- PCGs co-extensive
- Bonds on demand with expiry date and “pay or extend” provisions

Retention / Retention bonds

- To cover Contractor’s duty to repair defects

Lenders’ direct agreement

- Step-in (and unlocks contractor’s right to suspend or terminate) – may be temporary or permanent
- Payments
- Performance security

Payment

Interim payments

- Milestone or valuation
- Front-loading on milestones

Drawdown schedule

- To align with loan availability

Advance payments

- Long lead/down payments
- Protected by bond
- Unwinding

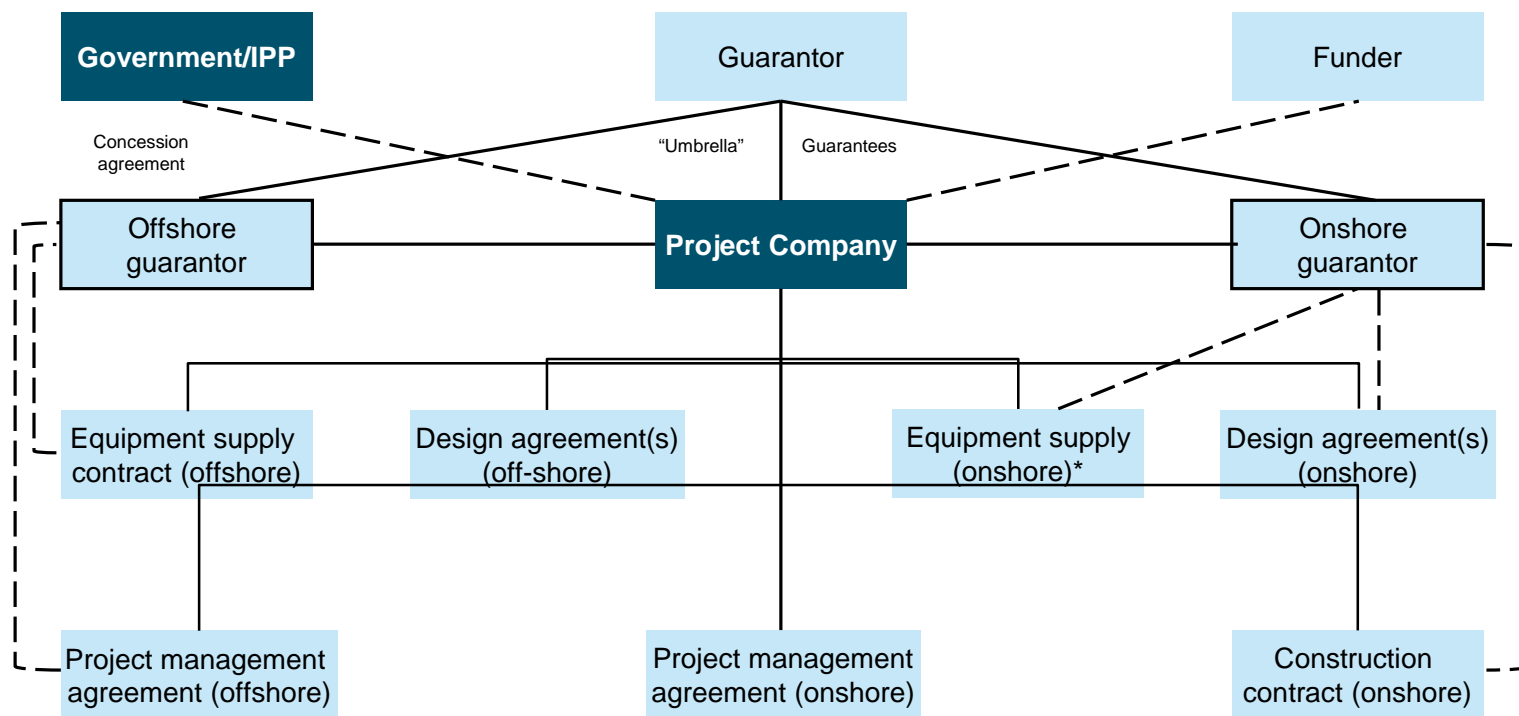
Failure to pay

- Interest
- Suspension and termination
- Payment guarantee/letter of credit

Indexation and currency risk

- Usually Contractor risk

Split EPC Contract



**note that many jurisdictions require procurement of some equipment from local suppliers: for example Brazil*

Challenges of SPLIT EPC

EPC Contract split into two or more parts

- Off-shore
- Onshore

Done primarily for tax, regulatory or foreign currency benefits

- Local advice, particularly on tax, will govern how the split is achieved

Administration

- e.g. notice under one contract is effective for the other; common change control mechanisms

Wrap Agreement or combined (off-shore) PCG

- Cross default and cross-defence provisions
- Common termination provisions
- Caps on damages sometimes divided between off-shore contracts (ability to draw on unused cap)
- Scope for gaps with separate specifications

Possible Allocation of Key Risks in an EPC Contract

Owner	Contractor
<ul style="list-style-type: none"> • Consents and permits (some) 	<ul style="list-style-type: none"> • Consents and permits (most)
<ul style="list-style-type: none"> • Site access (and information) 	<ul style="list-style-type: none"> • Ground and other physical conditions
<ul style="list-style-type: none"> • Pay the contract price 	<ul style="list-style-type: none"> • Design
<ul style="list-style-type: none"> • Variations 	<ul style="list-style-type: none"> • Supplier, manufacturer, sub-contractor default
<ul style="list-style-type: none"> • Breaches of Project Owner's obligations 	<ul style="list-style-type: none"> • Availability of plant, labour and materials
<ul style="list-style-type: none"> • Breaches of Project Agreements 	<ul style="list-style-type: none"> • Strikes and industrial action
<ul style="list-style-type: none"> • Suspension of work 	<ul style="list-style-type: none"> • Weather (onshore)
<ul style="list-style-type: none"> • Force majeure (time only?) 	<ul style="list-style-type: none"> • Force majeure (money)?
<ul style="list-style-type: none"> • Changes in law 	<ul style="list-style-type: none"> • Compliance with law
<ul style="list-style-type: none"> • Fuel for testing and commissioning 	<ul style="list-style-type: none"> • Inflation (costs of material/labour)
<ul style="list-style-type: none"> • Taking output (during testing and commissioning, commercial operation) 	<ul style="list-style-type: none"> • Currency exchange rate risk

Thank you

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