

# Risk Allocation and Bankability in Construction Projects

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Ibaad Hakim, Senior Associate, Construction and Engineering Abu Dhabi

[Ibaad.hakim@whitecase.com](mailto:Ibaad.hakim@whitecase.com)

18 March 2019

# Introduction

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## **Ibaad Hakim**

Senior Associate, Abu Dhabi

T: +971 2 611 3487

E: [ibaad.hakim@whitecase.com](mailto:ibaad.hakim@whitecase.com)

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

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# Bankability Considerations

# Objectives in the Construction Process

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

# Bankability Considerations for Construction Projects

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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



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# EPC and EPCM Contracts

# Key features of EPC Contracts

## Certainty

- Cost, schedule and quality

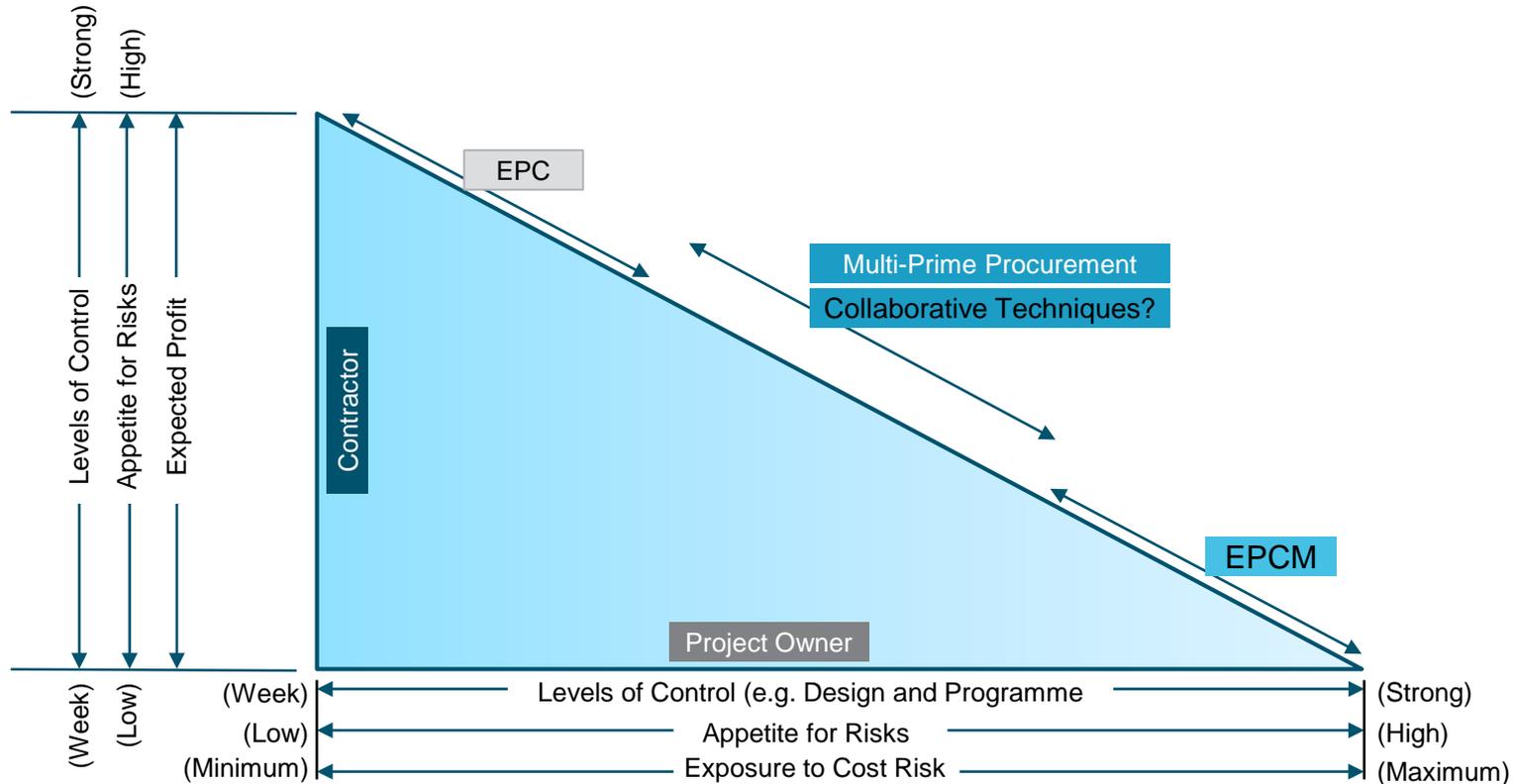
## Single point responsibility

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

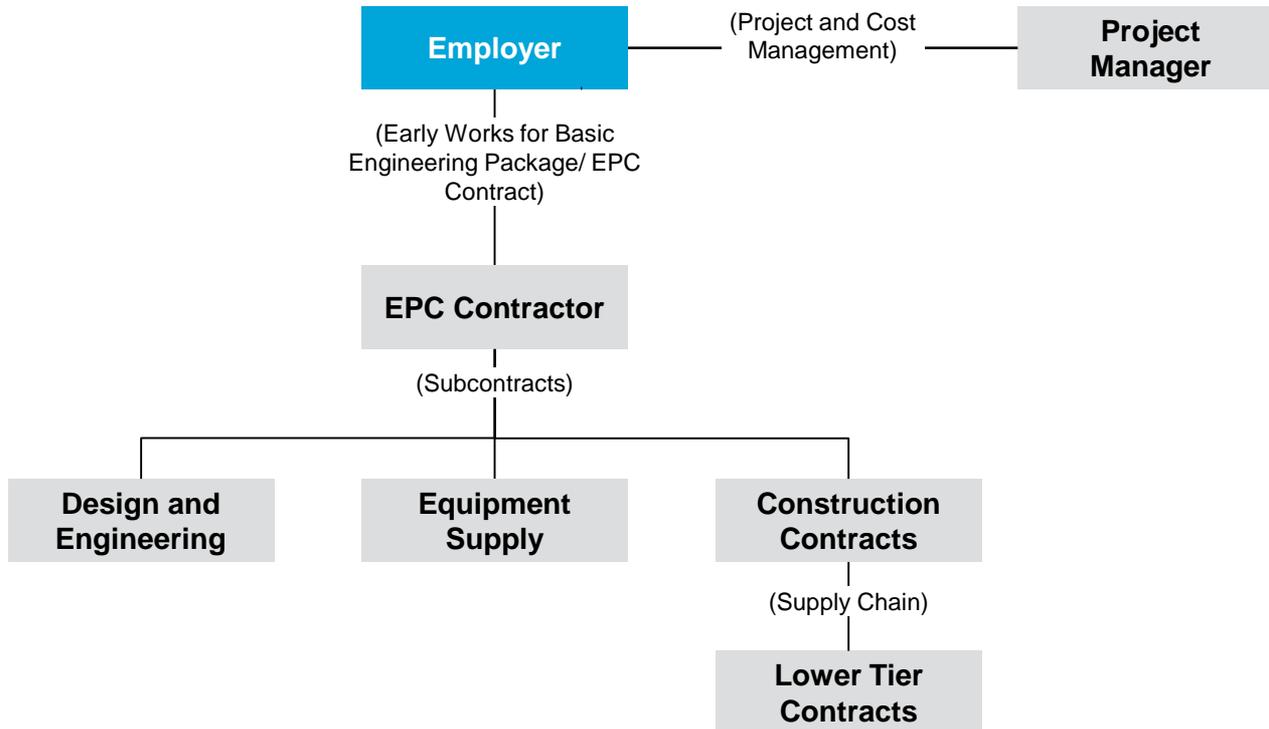
## Bankability considerations

- Maximum risk transfer and focus on remedies

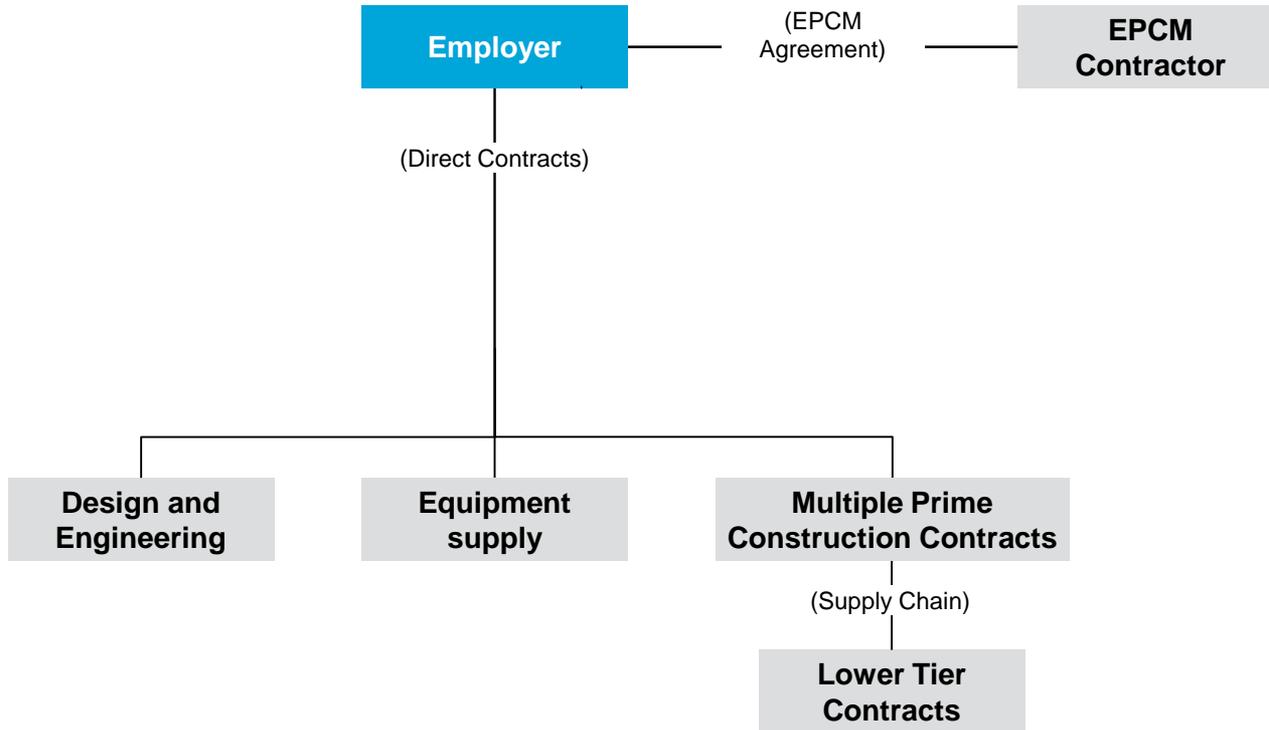
# Alternative Contracting Strategies



# EPC Contract Structure



# EPCM Contract Structure



# Key Differences between EPC and EPCM

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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

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# 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

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## 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

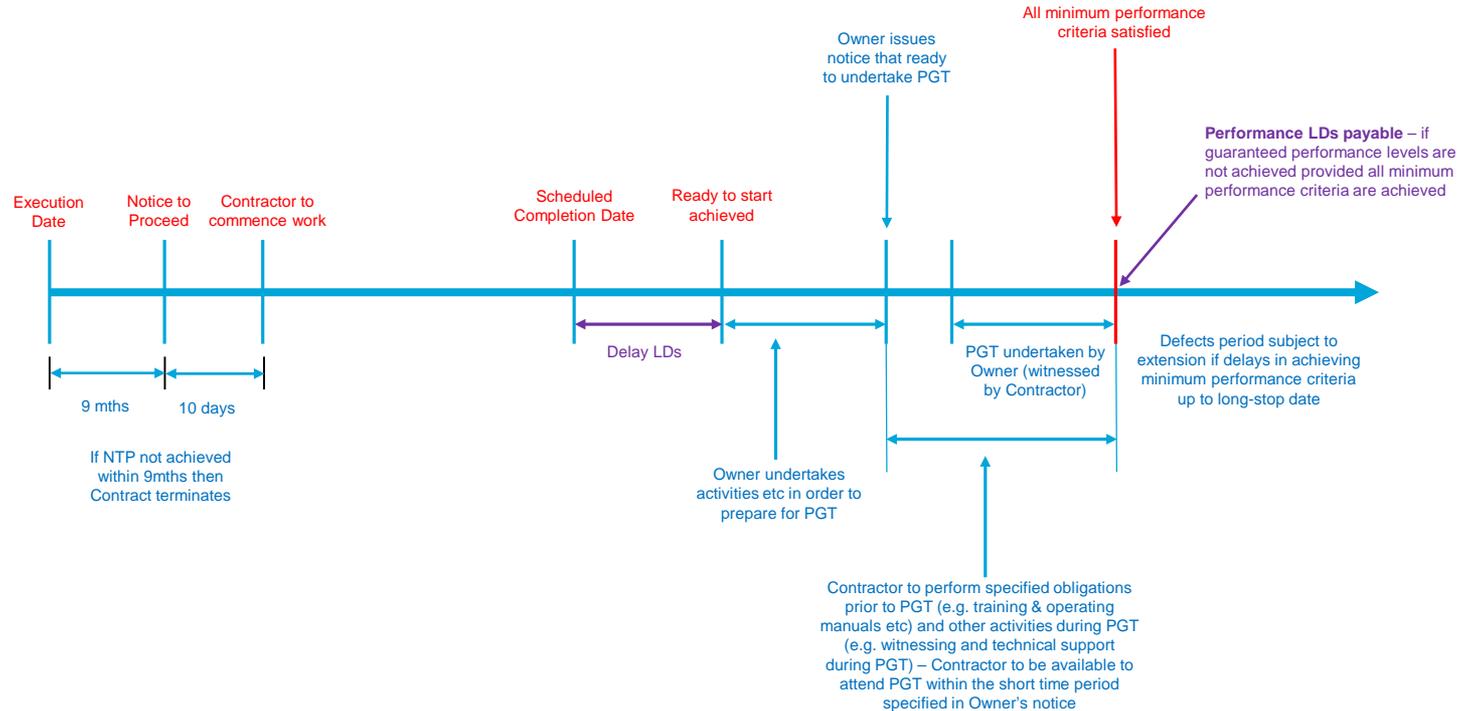
## Rejection

- 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

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## 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

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## 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

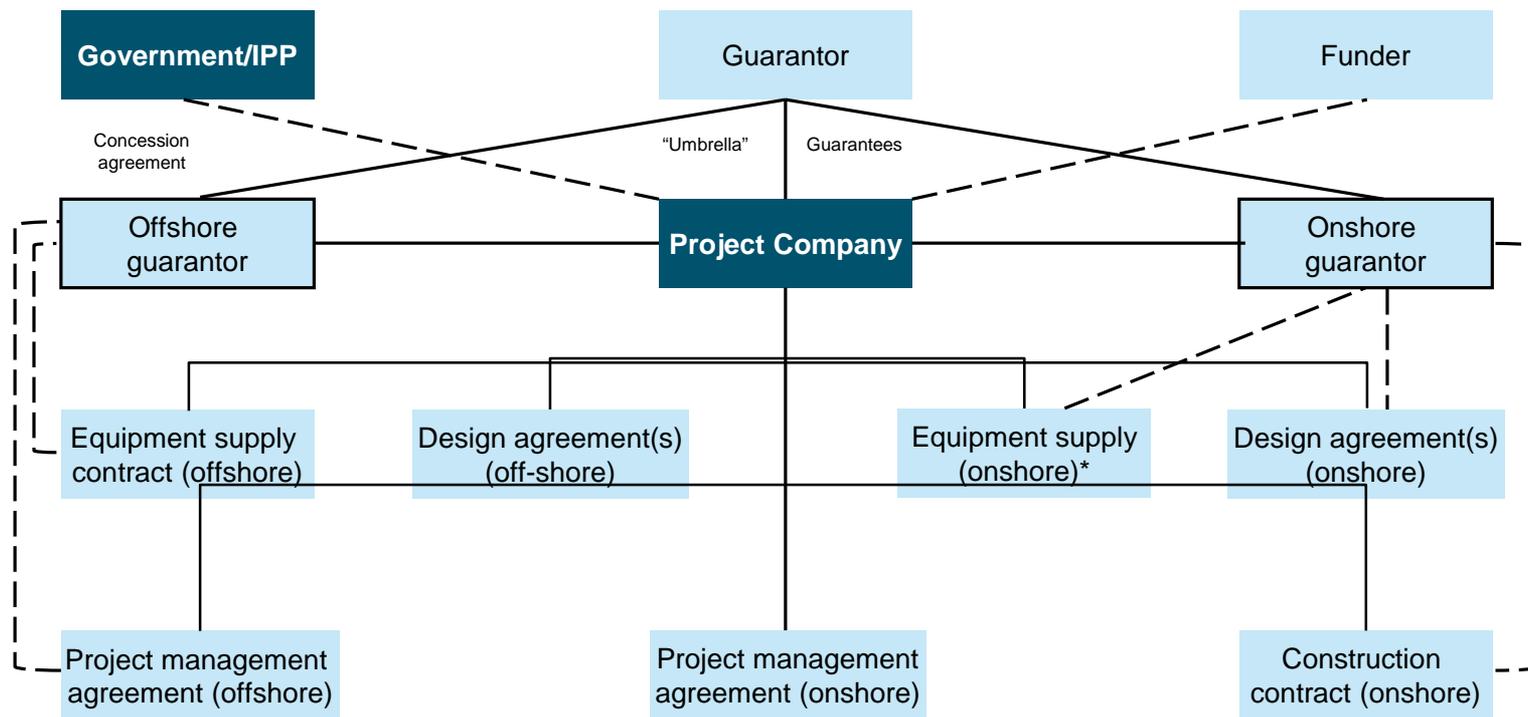
## Failure to pay

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

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Thank you

# Key Contacts

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## United Arab Emirates



**Michael Turrini**

Partner, Dubai

T: +971 4 381 6223

E: mturrini@whitecase.com



**Luke Robottom**

Partner, Abu Dhabi

T: +971 2 611 6421

E: lrobottom@whitecase.com



**Ibaad Hakim**

Senior Associate, Abu Dhabi

T: +971 2 611 3487

E: ibaad.hakim@whitecase.com

## Saudi Arabia



**Luka Kristovic Blazevic**

Partner, Riyadh

T: +966 11 499 3600

E: lkristovicblazevic@whitecase.com

## Qatar



**Julian Bailey**

Partner, Doha

T: +974 440 64311

E: jbailey@whitecase.com



**Payvand Vahdat**

Partner, Doha

T: +974 44064 324

E: pvahdat@whitecase.com