

# **EPC Contracts and NEC** 1<sup>st</sup> November 2023

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#### **Speakers**



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# Agenda

- Introduction
- What is an EPC contract?
- Design and risk allocation
- Payment
- Time management
- Testing, defects, operational stage
- EPCM
- Questions

## What is an EPC contract?



Engineering, Procurement and Construction - Key features:

- Turnkey concept design, construct, complete, test and handover in completed state
- High level of risk transfer
- Single point responsibility
- Payment lump sum (usually)
- Outcome based specification

#### What is an EPC contract?



- When to use an EPC contract?
- The advantages and disadvantages of EPC contracting:
  - Single point responsibility v loss of control
  - Risk transfer v risk premium
- Contractor selection



# **Design allocation**

- NEC flexible approach to design works with an EPC contract.
- 21.1 The *Contractor* designs the parts of the *works* which the Scope states the *Contractor* is to design.
  - state in the Scope the performance requirements the *Contractor's* design is to meet.
- Design proposals accepted at tender are binding on the Contractor.
  - Can only be changed by an instruction of the *Project Manager*
- 21.2 the *Contractor* submits the particulars of its design as the Scope requires to the *Project Manager* for acceptance.
  - Set out procedure for submission and acceptance in the Scope.
  - *Contractor* retains responsibility for design after acceptance
  - Contractor can change the design later, subject to acceptance



# **Risk allocation**

- Selection of main and secondary Options
- Compensation events
  - Client requirements change
  - Failure of Client or Others to act
  - Unforeseen events
- Option Z
- Liability for damage or injury



- Traditional approach Fixed price lump sum
- NEC :
  - Option A Priced contract with activity schedule
  - Option C Target contract with activity schedule
  - In addition:
    - Option X6 Bonus for early completion
    - Option X17 Low performance damages
    - Option X20 Key performance indicators
    - Option X21 Whole life cost



## **Time management**

- NEC uses the programme as a management tool
- Contract allows flexibility in level of Client involvement
  - Acting through the Project Manager
- Allows Client to know Contractor's intentions
  - Regular updates frequency fixed by Client
  - Awareness of need for action
  - Allows early warnings if problems foreseen



## Testing, defects and the operational stage

- Testing and commissioning regime Use of Scope for e.g.:
  - Factory testing
  - Pre and post completion testing
  - Acceptance and other tests

• The operations stage – EPCO and use of NEC4 Design Build Operate (DBO)





- Engineering, Procurement and Construction Management
- Differences from EPC:
  - Contractor responsible for management, not construction
  - Contractor appointed using a Professional Services Contract
  - Client enters into direct contracts with the supply chain (usually using ECC)

works | services | supply
The EPCM option



Benefits of EPCM:

- The ability to start early
- Better costs management
- Better quality control and change management
- Different funding model

#### When is EPCM suitable?







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