



Future Project Delivery for Utility & Private Sector

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- Initially projects driven by utilities but privatisation introduced project finance
- Previously in a tight market EPC was the norm with owners passing all risk to contractors and lenders only funding EPC
- Market then changed - driven by huge demand for equipment which lead to high prices and long lead times
- Suppliers passing risks to owners and owners want to reduce prices - now multi-contract is also used
- Lenders reluctantly funded multi-contract projects but due to current climate even less willingness to do so
- Developments likely to be driven by bigger players and JVs

- Early projects constructed under EPC but lots of money lost
- More recently multi-contract structures (2-8 contracts)
- Seller's market with suppliers looking to pass risk to buyers
- Unlikely to change in near future due to the inherent risks of offshore environment and limited vessel availability
- Current projects basis is turbine supply only with transportation and erection by others



- More mature than offshore
- Equally multi-contract structures
- Suppliers keen to pass the risk to the owners
- Typical structure: Turbine Supply, Civil BOP, Electrical BOP
- Market however might soon change (lower steel prices, cancelled orders, less demand etc)
– will this mean a move to EPC?



- More mature than onshore
- Equally multi-contract structures on larger scale units (>20 MW)
- Suppliers keen to pass the risk to the owners but also keen on new market positioning
- Typical structure: Boiler Supply, Turbine Supply, Fuel handling equipment, Civil BOP, Electrical BOP
- Market however might soon change (lower steel prices, cancelled orders, less demand etc) – will this mean a move to EPC?



- Most mature market
- Multi-contract structures potentially on larger scale units (>400 MW) depending on OEM
- Suppliers keen to pass risks to owners
- Typical structure: Boiler Supply, Turbine Supply, Fuel handling equipment (Gas compression or coal handling), Civil BOP, Electrical BOP
- Similar to the other technologies, the market will change – will this mean a move back to EPC but with non OEM's?



- Emerging market again
- Likely to have multi-contract structures but still unclear
- Suppliers will be stretched and there will be competition for the same resource with the other technologies
- How is the current market going to affect the funding?
- Recent experience: Flamenville, France and Olkiluoto, Finland



Multi-contract	EPC
Cheaper	More expensive due to EPC wrap (20-30%)
Higher contingency	Less contingency
Less price certain	More price certain
More risk due to interfaces (technical and contractual)	Less risk due to interface – but issue if contractor not performing
Bigger owner project team	Smaller owner project team
Specialised and experienced owner team	Not necessary for the whole team but for a few key people
Difficult to establish fault and LDs unlikely to cover project	One to one situation

- Current climate uncertain and fast revolving
- Lack of skills/understanding could make the difference between a successful and disastrous project
- Experience in all technologies and all clients giving us great insight on the needs and drivers of all players
- Extensive skills pool utilised across the group identifying synergies between technologies and contracting strategies
- Local and international presence
- Quick response times

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