

Uncharted Waters: Risk Allocation in Evolving FPSO and FLNG Contracts

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The FPSO and FLNG sectors are experiencing a period of unprecedented contractual complexity. As projects grow larger, traditional frameworks in EPCIC contracts for managing cost exposure, scheduling risk and regulatory compliance between operators and contractors are being tested to their limits.

Three issues in particular, supply chain delays, inflationary pressures and evolving environmental regulation, are reshaping the way in which these contracts are negotiated and structured.

Supply Chain Delays: Rethinking Schedule Risk

Chronic delays in procuring long-lead items have become one of the defining challenges of the current FPSO and FLNG markets. Critical components such as turret mooring systems, topsides modules, cryogenic FLNG equipment and gas turbine generators routinely face extended lead times, exposing the limitations of traditional EPC delay regimes.

The tension is familiar but is growing stronger. Operators continue to demand schedule certainty, typically underpinned by liquidated damages for late delivery. Contractors, however, increasingly argue that systemic, post-pandemic supply chain issues, compounded by geopolitical issues and material shortages, have made conventional liquidated damages frameworks unsustainable. When a turret mooring system that once had a 24-month delivery window in some cases now takes 36 months or longer due to factors entirely outside the contractor's control, determining which party should bear that risk becomes sharply contested.

In response, several new contractual approaches are gaining traction. One increasingly common approach is the use of excusable delay carve-outs for identified long-lead items. These provisions separate delays attributable to specific critical-path components from the liquidated damages regime, provided the contractor can demonstrate it took reasonable steps to mitigate.

A more fundamental departure from traditional procurement approaches is the adoption of shared-risk procurement models. Under these arrangements, the operator procures certain critical items directly, thereby removing them from the contractor's scope of work and eliminating the associated schedule risk that would otherwise fall on the contractor. For example, on recent West African and Brazilian FPSO projects, operators have placed direct orders for gas turbine generators and specialist mooring components, entering into supply agreements with manufacturers and furnishing the items to the contractor as owner-furnished equipment. This strategy can reduce exposure to contractor markups, secure Original Equipment Manufacturer (OEM) warranties for critical systems and allow orders to be placed earlier in the project cycle, thereby bypassing the delays inherent in lengthy EPC supply chains to maintain tight delivery schedules.

These developments represent a genuine departure from the traditional single-point EPC model and signal a broader willingness to distribute schedule risk more equitably across the project chain.

Inflationary Pressures: Pricing in an Uncertain Market

Cost escalation has been a persistent feature of the FPSO sector in recent years. Tight fabrication yard capacity, particularly in East Asia, where the majority of FPSO hulls are constructed, has combined with materials inflation (notably steel prices) and shortages of specialist labour to drive sharp increases in project costs.

Contractors are responding by pushing back against fixed lump-sum pricing, which leaves them exposed to cost movements over multi-year construction programmes. The result has been a migration towards more nuanced pricing structures. Hybrid models, which combine a lump-sum element for a defined scope with reimbursable components for areas of cost uncertainty, are increasingly common. However, they introduce a different challenge: namely, reduced cost certainty for project sponsors.-

The use of escalation formulae tied to published indices (such as steel price indices or labour cost indicators) is also growing. These mechanisms allow the contract price to adjust in line with actual market movements, reducing the risk premium that contractors would otherwise build into a fixed price. A key difficulty lies in selecting an index that accurately tracks the contractor's underlying cost drivers. Any mismatch can result in under- or over-compensation that compounds over the life of the project. Traditional budgeting models are increasingly struggling to accommodate the resulting cost uncertainty in a volatile commodity price environment.

Environmental Regulation: Contracting for a Moving Target

Perhaps the most complex challenge facing FPSO and FLNG projects today is the rapid evolution of environmental regulation. The typical construction window for an FPSO from contract execution to vessel delivery spans three to five years. During that period, the regulatory landscape governing emissions, flaring, venting, produced water discharge and carbon intensity may change materially.

Recent examples illustrate the point. Tightening requirements under MARPOL Annex VI regarding sulphur and nitrogen oxide emissions and evolving national regulations on routine flaring and venting in jurisdictions such as Brazil and Guyana have all introduced compliance obligations that may not have been fully defined at the time of contract execution.

The contractual response has taken several forms:

1. Change-of-law clauses, long a feature of EPCIC contracts, are being drafted with greater specificity to address environmental regulation, including distinctions between changes that were foreseeable at the contract date and those that were not.
2. Some operators are also adopting adaptable design strategies, specifying that vessels be constructed with sufficient structural capacity and space to accommodate future emissions abatement equipment, such as carbon capture systems or alternative fuel capability, even where such equipment is not required at the date of delivery.

These strategies reflect a pragmatic recognition that regulatory compliance in this sector is not a fixed target but a moving one, and that contracts must be structured to accommodate change

without triggering protracted disputes over scope and cost.

Conclusion

The FPSO and FLNG sectors are navigating a period of significant contractual evolution. Supply chain fragility, cost volatility and regulatory uncertainty are collectively driving a rebalancing of risk between operators and contractors. The projects that succeed will be those whose contracts are crafted not merely to allocate blame when things go wrong, but to create frameworks flexible enough to manage the unforeseen.