

PROJECT MANAGEMENT SERVICES [NEW BUILDS / REFURBISHMENT]



Introduction to Project Management [Onshore | Offshore]

OES have been working alongside rig owners new build projects since early 2000's. involved in shipyard projects in Keppel Fels, Shenzhen, Shanghai Yantai Raffles, Jurong, MIS, Samsung Heavy Industries, Vicksburg Marine, and many others for offshore drilling rigs. The land drilling market, OES have worked with major players such as NOV, H&P, HongHua, Dresco, ZPEC, Drillmec, Kerui, Bentec, Schlumberger. OES have an extensive track record over the course of three decades of providing various project support to these rig manufacturing and building companies.

How many new build rig projects has OES undertaken?

OES work closely with the drilling contractors and have a wealth of experience in project management and have provided these services to onshore and offshore drilling contractors globally since the early 2000s. OES can attribute to nearly 200+ onshore / offshore drilling rig projects participation in the last 3 decades where our teams have supported drilling contractors with new build rigs ranging from offshore semisubmersibles, drillships, jackup and land rigs globally. we have provided various personnel to support these builds, such as project managers, project coordinators, document controllers, subsea engineers, tool pushers, mechanical and electrical specialists.

What influences new build projects? Market Conditions | Material Prices

Many factors influence rig construction costs, such as market conditions, design type, construction yard, and rig specifications are the primary factors. Contract type, yard productivity, and scale economies also influence cost, but are either unobservable or more difficult to ascertain the nature of their impact. Prior to a new rig being ordered, potential market and research would be undertaken and reviewed.

Market conditions, prices are determined by the demand for rig construction services and the number of yards capable of supplying these services. Drilling contractors demand newbuild rigs when day rates and utilization rates make investment criteria positive. But only a small number of yards around the world are capable of building rigs; and during periods of high demand, the supply of rig construction services saturates the market, leading to backlogs and price increases

Material prices, building a rig requires steel, labour, drilling, and other equipment. The manner in which cost is distributed across these categories determines the variation in construction cost by rig class, complexity, and time. Yard location plays a key role. In China, labour costs are low and are likely to represent a small proportion (on the order of 10%) of total cost

Equipment prices, engines, generators, drilling equipment, tubulars and camps are significant components of rig cost. These are all third-party materials purchased by the contractor or builder assembled onsite or at another location.

Time Factors, The amount of time between when the rig is ordered and delivered is important in determining costs and risks to both parties. The time to construct a rig depends on a number of factors but is typically 9 to 15 months; however, the time between contract finalization and rig delivery can significantly exceed the construction time due to yard backlogs.

What is the cost of a new build?

Land rig | Jackup | Semisubmersible | Drillship

Land Rig – New build designs range from between \$17 million to \$35 million for Chinese built and equipped rigs with a horse power rating of around 750 HP to 3000 HP. For western built and equipped rigs with the same capacities, these range between \$25 million up to \$60 million. These prices usually include all drilling handling equipment, well control equipment, accommodation camps and all systems in order to operate in most regions of the world. The only difference as of late, is there is a significant amount of automation in the new build rigs that is being driven by the IOC's and therefore, this is pushing the new build price market up by around 15-20% on top of the standard design price list.

Jackup – Newbuild range from between \$159 to \$530 million where water depths between 200 ft to 500 ft and variable deck load (VDL) capability of 3,750 to 7,000 tons. The KFELS B Class, Letourneau 116E, and F&G JU-2000E are the most common designed jack-ups in the market today. The Letourneau Super 116E class is specifically variable because these rigs are being built for the Persian Gulf market where water depth capability is not at a premium.

Semisubmersible Newbuilds range from \$500 to \$800 million for water depth capacity ranging from 1,640 to 10,000 ft and VDLs between 5,000 and 22,000 tons. Operating displacement varies between 42,000 and 62,000 tons.

Drillship - Newbuilds range from \$600 million to \$1.3 billion for VDLs ranging from 15,000 and 24,000 tons and displacements between 45,000 to 112,000 tons, in part reflecting differences in oil storage capabilities. The Samsung 10000 and 12000 and the Gusto P10000 are the most common designs and can store small amounts of oil (approximately 140,000 bbl) during early production.

Can OES support and provide resources for an offshore or onshore project ?

Yes, OES can provide and resource and correctly identify project personnel, such as project manager, project engineers & cost controller, materials manager, document controller. In addition to the project support, also provide specialist disciplines for electrical, mechanical and welding QA/QC.

What is the key role of a project manager?

The project manager is responsible for monitoring all project activities and interfacing with project personnel to maintain at all times. A complete understanding of each area of project activity. Ensure the designated project is executed as per client's requirements and meet the HSE, quality, cost and schedule objectives. Responsible for the overall commercial and operational execution of the project in accordance with requirement from company and its client in terms of quality and time schedule.

The project manager will act as company's representative in coordinating and working with various supporting sections and departments of the company, as well the client, regulatory bodies, sub-contractors, and vendors during the entire execution of the project. The project manager will lead the delivery from initial engineering, through construction, to commissioning and hand-over of the rig/s with the support of whole project management team and can act as the primary budget holder for the project as a whole.



Can OES support the negotiation for a particular new build project?

Yes, OES can support the drilling contractor with all contract negotiations with rig builder and verification and construction contract. Schedule a pre contract meeting or kick off meeting with IOC. In the meeting complete a base line schedule. All of this comes into the execution plan and is the most important part of the project.

Are OES able to provide design review and project control review? Design Inputs / Design Outputs

Yes. OES have a personnel with over 40 years experience with new build design experience, and with a team of dedicated professionals supporting these requirements in the regional offices across the globe. OES have supported new build designs from concept to drawing reviews, review of OFE and AFE equipment integration processes too. Some attributes to design input and output are as follows;

REVIEW DESIGN INPUTS

List all technical specifications.

Prepare a design an Improvement list.

Functional and performance requirements.

List Applicable statutory and regulatory requirements.

Where applicable, information derived from previous similar designs.

Other requirements essential for design.

REVIEW DESIGN OUTPUTS

Ensure that the design Outputs:

Meets the input requirements for design.

Provides appropriate information for purchasing, production and for service provision.

Contains or reference product acceptance criteria, and Specifies the characteristics of the product that are essential to its safe and proper use.

Design Outputs contain one or more of the following:

Design calculations

Structure analysis

FMEA



What are the main attributes to a successful project?

The main attribute to a successful project is to ensure the below is covered in the management procedure. These are a few to mention.

- Lessons learnt register – completed throughout the project life cycle
- Risk Register - completed throughout the project lifecycle- Some standard ones are – Quality control of builder, API, Client, Electrical, IADC standards not being met, Shipping, OFE equipment delivery, equipment selection and design, FAT and commissioning procedures and failures and the list goes on but during the life cycle of the project every item which is or could be a risk is entered into the register then planned down to lowest risk factor.
- MEL - Material Equipment List - This is the master list of all items, equipment contract requirements and what was ordered, costs, shipping everything goes into this for tracking of everything.
- Procurement process with AFP (application for purchase)
- Schedule detailed as well as condensed.
- Sharing project report weekly deliver
- Cost reporting
- WBS - Work Breakdown Structure, this is a numbering system to track all which is used on the MEL on purchasing and cost control. Then can control everything through the whole asset lifecycle with this system.
- Project Action register this starts on day one this covers any deficiency, and items which someone needs to complete, basically everything and track the closing of it with anything to do with the project.



What are the main project management focus areas, when considering new build rigs?

Part of the focus with any new build rig project is to ensure deliverables by the builder are met, and that all communication between each party is transparent. The project team should be able to contribute and drive the project by providing key experienced personnel that are conversant with understanding international and client requirements.

