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Offshore Value Chain Optimization

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Abstract

The paper addresses the major points in the offshore value chain and describes a market maturing as it gains more global acceptance, allowing segments of the industry to transition from typical land-based upstream and downstream services with conventional LNG carriers providing point to point transportation solutions to non-typical offshore based systems providing added value to operational and commercial considerations through increased flexibility, reduced costs and a major shift from the traditional concept of fixed land-based assets. As the number of offshore and dockside regasification facilities continue to grow, the ability to cost effectively open new seasonal and year-round markets utilizing regasification capable LNG vessels as floating terminals in conjunction with ship to ship transfer capabilities to maximize the utilization of these assets, continues to demonstrate a global appeal. Applying the valuable lessons learned in taking LNG transfer and regasification operations offshore will allow offshore LNG participants to “complete” the value chain by developing floating liquefaction solutions to allow the cost effective development of associated and “stranded” gas reserves that, to date, have not been considered to be worthy conventional for development.

The offshore value chain as discussed herein, consists of a floating natural gas processing, liquefaction, and storage system, a suitably reliable offloading system, and transportation to offshore, dockside, or conventional regasification facilities as market and other considerations dictate, as is based on nearly 5 years of operational expertise in the construction and operation of LNG regasification vessels, ship to ship transfer systems, and the development of numerous offshore and onshore facilities to accommodate these vessels and to open new and under-serviced markets

Abbreviations

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|-------|--|
| BOG | Boil-Off Gas |
| BV | Bureau Veritas (France) |
| ESD | Emergency Shut Down |
| FLNG | Floating Liquefaction of Natural Gas |
| IGC | IMO Gas Code |
| LNGC | Liquid Natural Gas Carrier |
| LNGRV | Liquid Natural Gas Regasification Vessel |