Decommissioning of Aging Offshore Oil and Gas Facilities Increasing Significantly, with Annual Spending Rising to $13 Billion by 2040, IHS Markit Says

Analysis: 600 projects to be decommissioned during next five years with 2,000 more to follow through 2040, as market spending grows 540 percent

HOUSTON (Nov. 29, 2016) – The decommissioning of aging offshore oil and gas platforms, subsea wells and related assets is increasing dramatically, with more than 600 projects expected to be disposed of during the next five years alone. This rapid trend toward decommissioning is causing spending to rise significantly, according to a new study by IHS Markit (Nasdaq: INFO), a world leader in critical information, analytics and solutions.

IHS Markit expects spending on decommissioning projects to increase from approximately $2.4 billion in 2015, to $13 billion-per-year by 2040, or an increase of 540 percent, says the new IHS Markit Offshore Decommissioning Study Report. The report provides a detailed market analysis and assessment of the legal, regulatory and financial requirements for decommissioning in the U.K., Norway, the U.S. Gulf of Mexico, Indonesia and Australia.

An additional 2,000 offshore projects will be decommissioned between 2021 and 2040, the report noted, and total expenditures from 2010 to 2040 will amount to $210 billion. During the next five years, Europe will absorb approximately 50 percent of global decommissioning spending as the industry removes major offshore structures from the North Sea. Each year, the industry currently decommissions an average of 120 projects on a global basis, IHS Markit said.

“In terms of decommissioning, the global offshore industry is headed for a perfect storm,” said Bjorn Hem, senior manager of IHS Markit upstream costs and technology service and one of the study’s authors.

“We see increasingly stringent decommissioning regulations coming into force at the same time that the inventory of structures nearing end-of-life status is getting larger and more complex,” Hem said. “At the same time, the providers of decommissioning services are very fragmented—there are no dominant players, so this makes it even more difficult for offshore E&P (exploration and production) companies and offshore service companies to accurately predict decommissioning costs and risks. This is why we embarked on a comprehensive analysis of the associated costs and supply side of this market.”

According to the IHS Markit report, as E&P activity has shifted to deeper waters, harsher environments and increasingly complex projects, some of which comprise hundreds of wells and miles of risers tied back to a few ultra-large platforms, operators now face enormous challenges when planning the removal of these assets. Some of these decommissions can cost billions of dollars and take years to successfully dispose of, and decommissioning delivers no return on investment or revenue, but instead carries significant environmental and regulatory liabilities.

“The effective decommissioning of offshore platforms, subsea wells, and related assets is one of the most important business challenges facing the oil and gas industry today and in the future,” said Bill Redman, senior director of upstream costs and technology commercial strategy at IHS Markit. “Decommissioning represents a considerable shift in terms of sustainable business planning for most operators.”

“Despite E&P activity in open water that dates back more than 60 years, the offshore decommissioning industry is still essentially in its infancy, and as a result, decommissioning activities play only a minor, if any, role in many operators’ or vendors’ business plans,” Hem said. “However, due to the increasing number of assets that are destined for decommissioning, along with the increasingly stringent regulatory and environmental considerations relative to offshore operations, this is quickly becoming a business priority for offshore operators.”
Key environmental issues in decommissioning include dealing with any potential direct effects on the marine ecosystem, ensuring the appropriate use and containment of hazardous substances, and addressing waste management issues, including seabed debris accumulated during the life of the platform. Items typically involved in decommissioning include surface facilities, called topsides, as well as subsea installations, pipelines and wells. These topsides structures can vary greatly in size and function, from one small well/wellhead to massive deepwater installations, including large processing and storage facilities, and staff accommodation facilities.

Navigating the myriad environmental and waste management regulatory requirements that individual countries have regarding decommissioning is a significant operational challenge for operators and offshore vendors, the IHS Markit report said, and that equation is getting even more complex as decommissioning activity shifts from individual assets to entire fields, and to larger, more complex structures.

Historically, the Gulf of Mexico (GOM) and the North Sea regions, which entered the oil and gas industry first, have dominated decommissioning demand. Older offshore installations also exist in other regions, such as the Middle East, but because of their longer field life, IHS Markit expects these assets to operate for many years to come.

According to the IHS Markit report, the Gulf of Mexico has been the largest region in terms of the number of platforms decommissioned (approximately 4,000), and with more than 5,000 oil and gas structures in place, the GOM also has the largest number of platforms to be decommissioned. Since these offshore facilities provide significant habitat for marine life, the GOM is home to the largest artificial reef system in the world. Many global operators participate in programs, which allow the repurposing of decommissioned rigs as artificial reef structures.

"While North America is the largest market for decommissioning, the European region has the largest amount of offshore decommissioning requirements. Based on the size and volume of the structures being decommissioned in the North Sea, including concrete gravity-based structures (GBSs)," said Grigorij Serscikov, senior manager, Upstream Oil and Gas at IHS Markit, and another author of the study. Statoil, Total, Chevron, ExxonMobil and ConocoPhillips round out the top-five operators globally in terms of spending by operator, according to the IHS Markit report.

Beyond North America and Europe, Angola and Nigeria will drive decommissioning spending in Africa, while shallow-water Australia will drive demand in the Asia-Pacific region. Mexico and Brazil will be the focus of decommissioning demand in Central and South America, IHS Markit said.

Decommissioning costs also vary across a wide range of platform types, from unmanned production units to large multi-platform complexes. Those costs often differ even for similar facilities, as many projects have their own level of specialized decommissioning requirements.

In general, historical decommissioning costs for rigs in the Gulf of Mexico have been in the $500,000 to $4 million range for shallow-water structures. Platforms included in this category can vary from single-pile, one-well platforms that are located in several feet of water, to larger, four-pile structures in water depths up to 120 meters.

Costs naturally increase with water depth and size, as well as by type, complexity and size, IHS Markit said. A four-pile structure in 15 meters of water depth typically costs just under $2 million in decommissioning and removal, whereas a structure in 100 meters of water depth will cost nearly double that to dismantle. The North Sea involves much larger structures and costs typically are higher. For example, one gravity-based system with a 22,500-ton topsides and an 180,000-ton substructure has an estimated decommissioning cost of $2 billion.

To speak with Bjorn Hem, Bill Redman or Grigorij Serscikov, please contact Melissa Manning at melissa.manning@ihsmarkit.com. For more information on the IHS Markit Offshore Decommissioning Study Report, please contact clare.fletcher@ihsmarkit.com.

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