

Oil & Gas Automation Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The Oil & Gas automation market is expected to register a CAGR of 5.9% over the forecast period. Despite fluctuating oil prices, there has been a steady demand for Oil & Gas. Nevertheless, energy usage worldwide is gradually rising, which is expected to further fuel market expansion.

Key Highlights

The Oil & Gas industry began the move toward digitization with more sensors accumulating data from rigs worldwide. Adopting digital technologies can improve internal communication and simplify plans by allowing engineering teams to work more efficiently with Oil & Gas companies to manage data and project requirements. Automation in the Oil & Gas industry can improve efficiency and reduce costs.

Automation and digitalization are advancing quickly in the oil industry. Instead of being reactive, machine monitoring is now proactive. Businesses are putting money into digital platforms, basing judgments on data, and building a cutting-edge virtual workspace focused on a good worker experience. Baker Hughes, an industrial innovation company, and AQL, the Abu Dhabi National Oil Company's (ADNOC) combined partnership with Group 42 (G42), signed a strategic partnership deal in November 2021 to develop advanced analytics services for the worldwide Oil & Gas sector.

Increasing global Oil & Gas demand is expected to boost the demand for automation to compete in the market. The International Energy Agency said that by 2040, the world's demand for oil will go up by 21%, making it the source of 35% of all energy, and the demand for natural gas will go up by 31%, making it the source of 17% of all energy.

The Oil & Gas sector may be able to apply automation technology at reduced prices in order to increase production and get rid of any potential bottlenecks in the business model. The Oil & Gas sector is benefiting from the deployment of Internet of Things (IoT) solutions, from downhole monitors to surface-control valves broadcasting real-time information into boardrooms for analysis. This enhances operations and makes the entire oilfield a safer place to work.

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The COVID-19 outbreak boosted the demand for automation in the Oil & Gas industries due to a shortage of resources. The Oil & Gas automation industry was anticipated to be severely impacted in the post-COVID situation as the government's limitations were entirely abolished and output and explorations were conducted at maximum capacity. Furthermore, increasing government regulations in the Oil & Gas industry have also contributed to the adoption of automation solutions.

Oil & Gas Automation Market Trends

Variable Frequency Drives to Have Significant Share

Vendors are increasingly introducing new products to meet the growing demand for energy efficiency. For instance, in October 2022, Rockwell Automation increased VFD Output Frequency for High-speed Motor Applications by introducing enhancements to medium-voltage PowerFlex 6000T variable frequency drives (VFDs). Demanding manufacturing environments like electric, oil, and gas operations rely on medium-voltage power to drive large industrial motors, often running 24 hours a day. The PowerFlex 6000T drives with TotalFORCE technology are claimed to deliver high-performance motor control and real-time operating system data that can help increase productivity and energy savings.

Also, the increasing demand for oil and natural gas in India is boosting investments in the industry. According to the Indian Brand Equity Foundation, the government has implemented several programs to meet the rising demand for oil and gas. It has permitted 100 percent foreign direct investment (FDI) in several industry categories, including refineries, natural gas, and petroleum products.

Without any disinvestment or diluting of domestic ownership in already-existing PSUs, the FDI limit for public sector refining projects has been increased to 49%. As seen by the existence of businesses like Reliance Industries Ltd. (RIL) and Cairn India, it now draws both domestic and global investment. By 2022, it is anticipated that the industry will bring in USD 25 billion in exploration and production investments.

The market is also witnessing an increased focus on process optimization. A VFD reduces downtime in the oil and gas industry because gas turbines require frequent maintenance, while VFDs and motors require very little maintenance. This enables more production, lower maintenance expenses, and improved productivity. This has encouraged various oil and gas companies to incorporate VFDs.

North America Holds a Significant Market Share

The U.S. is North America's largest oil and gas market. According to EIA, in 2021, the U.S. shipped petroleum to 176 nations and 4 U.S. territories at a rate of around 8.54 million b/d. About 2.96 million barrels per day (b/d) of crude oil made up 35% of all gross petroleum exports from the United States in 2021.

The oil and gas business in North America is process-driven, with continuing operations and extensive surveillance techniques. It is difficult for administrators to monitor and control the utilization of the equipment in the industry. Numerous North American enterprises have adopted the use of an HMI with a controller, or DCS, that allows operators to oversee operations. These technologies automate upkeep and repair operations for machinery and safety processes, such as alarm monitoring systems. The region's need for automation in the oil and gas industry is anticipated to be driven by elements including the region's stable economy, widespread acceptance of automated technology among oilfield operations and services providers, a significant presence of leading technology and systems vendors, and joint investments by public and private entities in R&D activities. The U.S. EIA reported that the Permian Region, the country's largest oil-producing region, produced around five million barrels per

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day (Mbpd) of oil in January 2022. The federal agency also stated that when contrasted to the same period in 2021, the valuation grew by almost 13%. Thus, increasing oil production across the region is expected to create opportunities for market growth over the forecast period.

Oil & Gas Automation Market Competitor Analysis

The Oil & Gas automation market is fragmented and competitive in nature. Some of the players are ABB Ltd, Honeywell International Inc, Rockwell Automation Inc, Mitsubishi Corporation, and Schneider Electric, among others. These players are continuously introducing innovative solutions in order to compete in the fragmented market.

In September 2022, ANYbotics announced commercial sales for ANYmal X to supply the oil, gas, and chemical industries with scalable autonomous assessment solutions. The impact of installing ANYmal X is causing businesses to increase robotic inspection automation.

In August 2022, TWMA introduced a real-time automation and tracking solution. The new XLink tool from TWMA is intended to give oil and gas producers more automation, more in-depth understanding, and real-time data monitoring to increase the effectiveness of their wellsite drill cuttings management system.

In July 2022, Sensia, a Rockwell Automation and Schlumberger combined venture, is the premier automation expert in oil and gas production, transportation, and processing. The cloud-native system provides a scalable, bundled platform for implementing digital initiatives for oil and gas enterprises. Choosing and combining solutions from many suppliers can reduce time, money, and effort instead of establishing a customized digital platform.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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