ADI Analytics

2023 Upstream Oil & Gas Outlook

Dustin Stolz

440 Cobia Dr • Ste 1704 • Houston • TX 77494 • (281) 506-8234
www.adi-analytics.com • info@adi-analytics.com

Upstream oil and gas fared well in 2022. Despite oil prices falling over 30% from their summer highs, oil and gas prices remain elevated, with WTI prices over $70 per barrel and natural gas at prices not seen since 2008. Net income in 2022 is expected to double from 2021 for oil and gas producers, reaching a new high of $4 trillion. Future trends will rely on how upstream producers and investors go along in 2023. We expect 10 key trends that will shape the upstream oil and gas industry in the coming years:

Geopolitics will continue to play a significant role in the oil and gas markets

Fallout from the Russo-Ukrainian war will continue to drive geopolitics and energy markets

Russia's invasion of Ukraine in February was the most significant event for energy markets in 2022. This war coupled with Russian sanctions from many western countries and the sabotage of the Nord Stream pipelines sparked an energy crisis, driving up prices for all sources of energy, especially natural gas and LNG. However, continued COVID-19 lockdowns in China helped limit further commodity increases as Chinese demand remained subdued. Europe became the largest importer of LNG, and the U.S. became the largest supplier of LNG, supported by large reserves of shale gas. Russia still has not decided if it will repair the Nord Stream pipelines, and OPEC refuses to increase production despite pressure from President Joe Biden. The war in Ukraine remains at a virtual stalemate and the tensions with Russia are likely to drive geopolitical tensions and commodity volatility throughout 2023.

North American shale producers will continue to show capital discipline

North American shale industry is continuing to show capital discipline and reward shareholders

Despite high oil prices throughout 2022, O&G companies maintained their production and capital discipline. Even with oil prices over $100 per barrel in mid-2022, the response of US producers to higher oil prices was underwhelming. US rig counts climbed from 586 at the beginning of the year to 750 at the beginning of July. But since then, rig count has only climbed to 784 at the beginning of December. In 2023, North American shale producers will continue to maintain capital discipline due to both inflationary pressures and a forecasted recession. Even as WTI oil prices remain above $70 per barrel, shale producers are choosing to conserve cash and reward shareholders rather than spend it on new production. Historically, shale companies have reinvested all their discretionary cash flow back into new capital spending and then borrowed extra to reinvest, with reinvestment rates as high as 110-130% of cash flows. However, a fall in drilled but uncompleted (DUC) well inventory, flat crude oil production levels, and slow rise in rig count suggest that the industry is no longer following the traditional price and investment cycle even with the global energy crisis supporting commodity prices. With low DUC inventories, no major increases in capital budgets, and slow to flat growth in US rig count, production growth is likely to remain subdued. With short term economic indicators pointing toward a recession, production growth will remain slow.

Economic recession fears will limit U.S. production growth

Artificial lift will continue to become a bigger component in shale plays

Our work shows growing reliance on artificial lift in both U.S. shale and overseas conventional onshore markets, and we see continued growth in artificial lift at the onset of production in shale wells. Historically, gas lift was widely used in the Permian due to unreliable power; however, power is becoming increasingly reliable in areas like the Delaware and operators are moving from gas lift to electric submersible pumps (ESPs) as the standard. Additionally, operators are increasingly seeing lower formation pressures in some older shale basins, which is causing ESPs to more frequently be installed at the onset of production. With sustained higher oil prices, relative to the last five years or so, and continued development infill well drilling, we see continued growth in the reliance of artificial lift.

Oil demand will surpass pre-pandemic levels

Oil to remain in tight supply

Numerous sources point to increases in oil demand in 2023. Forecasted demand increases range from 1.6 million barrels per day (MMBPD) to 2.3 MMBPD. Bearish economic forecasts will inhibit demand growth; however, relaxation of zero-COVID policies in China will help propel crude demand. World oil demand was set to reach 100.8 MMBPD in Q4 2022 and will reach over 101.0 MMBPD in 2023, surpassing pre-pandemic levels.

In December, the EU ban on seaborn imports of Russian crude took effect and the G7 adopted a $60 per barrel price cap on Russian crude. The effects of these policies remain to be seen; however, these actions will further constrict supply and keep prices elevated in already tightening market. Given these supply pressures, crude prices in 2023 are likely to remain elevated above the end-of-year 2022 lows.

OPEC+ production will remain below pre-pandemic levels and OPEC is unlikely to provide significant price support

Reductions in OPEC production quotas indicate they will not reach their pre-pandemic production level in 2023

Given production capacity constraints among OPEC countries and OPEC+'s unwillingness to support prices in October 2022, despite aggressive lobbying by the Biden administration, OPEC is unlikely to reach their pre-pandemic production levels in 2023, keeping oil prices elevated in a tightening market.

OPEC struggled throughout most of 2022 to hit output targets, with several countries, notably Nigeria and Angola, lacking production capacity to meet their targets. OPEC had hoped to restore all the production it cut in 2020 by Q3 2022. They steadily increased production throughout the year, but never reached their pre-pandemic levels. Then, in October, OPEC+ announced a cut in production quotas by 2 MMBPD, however, OPEC was already producing over 3 MMBPD less than it's 42.2 MMBPD quota.

Oil and gas companies will expand further into decarbonization and energy transition projects

ESG pressures, including decarbonization, have been mounting on the oil and gas industry for years. Many have pledged and made inroads on the net-zero commitments. However, the passage of the Inflation Reduction Act (IRA) in 2022 expanded 45Q tax credits and provided significant funding for energy transition projects. The passage of the IRA has led many companies in the upstream to pursue CCS projects, including companies already active in CO_2 operations, like Occidental, Denbury, and Kinder Morgan. Going forward the presence of upstream operators in the carbon capture, utilization, and storage (CCUS) space is likely to grow as well as in other energy transition industries, like geothermal and subsurface energy storage, as they seek to take advantage of their deep subsurface expertise and position their companies for the future.

Oilfield service (OFS) providers are poised for growth and attractive margins

OFS will perform well due to robust demand and continued labor and supply chain shortages

The past year was a good one for OFS. Demand for drilling and completion services increased, driving up rates and improving margins and profitability. Demand remains robust looking into 2023 with labor and equipment supplies remaining tight. Large E&Ps are moving to ensure they have equipment for 2023 suggesting a supply crunch in 2023. Policies enacted in 2022 (e.g., IRA), will support growth in new energy services, including growth in green hydrogen and CCUS. OFS providers are likely to invest to rebalance the market and rebuild global spare capacity to provide for sustainable growth. Traditional OFS growth will be led by activity in Latin America, West Africa, and the Middle East.

Gas players will continue to do well

Growth in natural gas production will be limited due to takeaway capacity constraints

In 2022, natural gas was one of the top performing markets, being fueled by an energy crisis in Europe that has yet to be resolved. Henry Hub prices increased by nearly 170%, going from ~$3.50 per MMBtu in early January to just under $10.00 in August. Since then, similar to oil, natural gas prices have dropped nearly 40%. A drastic increase in LNG imports into Europe allowed natural gas stocks to be replenished; however, the European commission is already warning that the EU may struggle to fill its storage tanks in 2023.

U.S. dry natural gas production increased in 2022, averaging more than 100 BCF per day in October and November and exceeding pre-pandemic production records. This growth was driven by increased activity in the Haynesville and Permian; however, takeaway capacity will limit production growth in these regions in 2023. Global gas supplies are likely to remain tight and keep prices elevated, although the highs seen in 2022 are unlikely.

High impact drilling and exploration will remain elevated

Supported by higher oil prices and improving balance sheets, drilling of high-impact oil and gas prospects rebounded in 2022 with discoveries yielding significant productive volumes. Two discoveries in Namibia (Venus 1- X operated by TotalEnergies and Graff-1 operated by Shell) opened a frontier play in the Orange basin that is likely to drive activity in the area going forward. The Venus discovery could be one of the biggest fields discovered in Sub-Saharan Africa, and the area is being referred to as potentially the next Guyana. Activity in Guyana is likely to remain elevated with continued discoveries there in 2022. Oil Majors and NOCs are already indicating capital budgets at the top end of their guidance and will drive this high-impact exploration.

Inflationary pressures will increase on offshore projects

Offshore projects will face increased inflationary pressure due to lack of investment in rigs and vessels

Globally, there are almost no new rigs or vessels under construction; however, offshore activity is picking up due to elevated oil and gas activity, as well as development of offshore CCUS projects. This tightening supply will increase inflationary pressures for offshore projects.

Traditionally, offshore rigs and vessels were financed by industrial companies and specialist financing groups. However, prior downturns have left offshore rig and vessel companies highly leveraged, and investors lack confidence for long-term demand on these expensive assets. Day rates and availability are key cost components for offshore projects, so going forward these projects will face increased inflationary headwinds until either activity slows or investments in rigs increase.

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ADI Analytics will continue to monitor, track, and research the upstream oil and gas market. Please review and contact us to learn more about our research.