

Energy Trends in 2023

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Clients and Friends,

When 2022 began, the energy sector was in the advanced stages of a recovery characterized by increasing activity and supportive commodity prices with crude and natural gas trading at ~\$75/Bbl and ~\$3.50/MMBtu, respectively.

While some energy companies will never fully recover from the unprecedented COVID-19 pandemic-driven demand shock, most publicly traded energy companies delivered outstanding operating results and share price performance in 2022. Energy was the best performing sector of the S&P 500 in 2022 with a 65% total return, while every other sector, except utilities, was negative.

But the biggest energy story of 2022, which will shape the sector for years to come, was the impact of geopolitical conflict. Declining Russian production as well as sanctions restricting Russian exports contributed to oil prices peaking in June at ~\$120/Bbl and natural gas prices peaking in August at ~\$9.50/MMBtu. It also led to a strategic pivot by Western Europe away from Russian supply and towards U.S. production, spurring new domestic export infrastructure in the U.S. and large-scale investment in commodity import infrastructure across Europe, including multiple LNG regasification facilities. Going forward, we expect the U.S. and other countries to reprioritize energy security, which will translate to a more expansive domestic energy policy and a heightened willingness to use natural gas to facilitate a cleaner energy future and support eventual carbon neutrality.

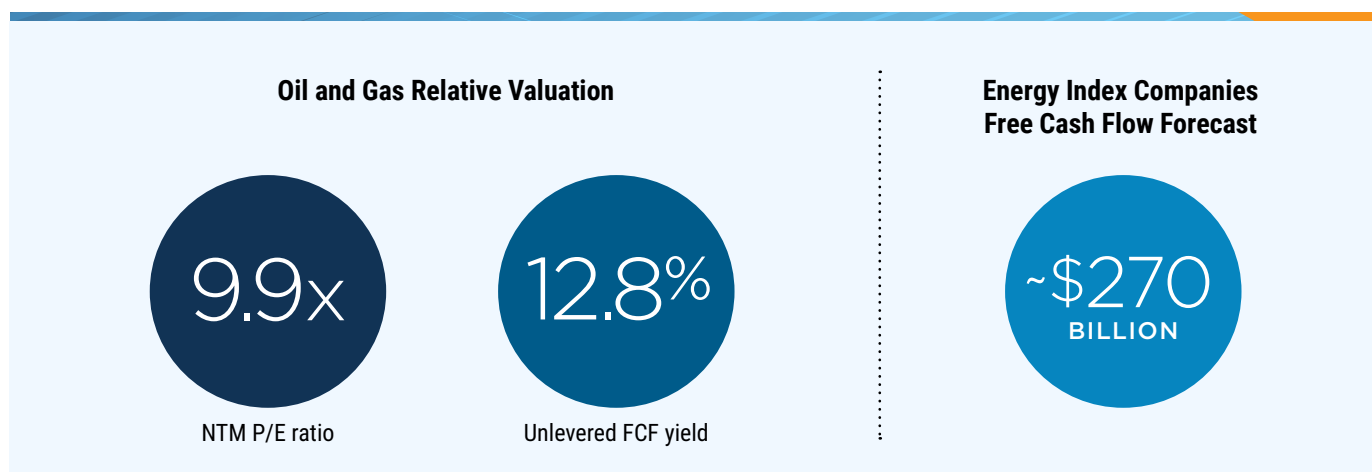
While we remain optimistic about the energy industry moving into 2023, the sector remains somewhat out of favor with generalist investors, and energy companies continue to face uncertainty about how best to navigate the increasing importance of ESG to institutional investors.

In late 2022, Washington made its most ambitious effort to transition to a less carbon intensive economy with the adoption of the Inflation Reduction Act of 2022. The incentives, subsidies and government investments in the legislation are a game changer for energy transition efforts, but we expect continued growth in traditional energy for years to come. Over time, we believe that companies spurring the energy transition will carve out a successful coexistence with traditional energy companies, and we believe that the transition to cleaner energy sources will take longer than the market anticipates.

As we enter a new year, we wanted to share a few observations on what we expect to be defining trends in global energy:

1) Energy Still Provides a Differentiated Investment Opportunity

The S&P 500 energy index has been the best performing sub-sector of the S&P 500 over the past 12 and 24 months, up 65% and 135%, respectively. Capital flight from oil and gas over the last several years has positioned energy companies, and the underlying commodities, for continued outperformance with the supply/demand deficit expected to increase in the coming years absent material incremental investment. Oil and gas remains a differentiated investment opportunity with the most attractive relative valuation of any sub-sector of the S&P 500 in today's market, with a NTM P/E ratio of 9.9x vs. the S&P at 18.2x and an unlevered FCF yield of 12.8% versus the S&P 500 at 5.3%. S&P 500 companies are forecasted to generate ~\$2,235 Bn in 2023 free cash flow, while the energy index companies are forecasted to generate ~\$270 Bn in 2023 free cash flow (12% of total S&P free cash flow versus a 5.2% market weighting in the index).



Unlike many prior cycles, oil and gas companies have shored up their balance sheets, demonstrated capital discipline and an ongoing commitment to returning capital to shareholders, with an S&P 500-leading dividend yield of 3.6% (versus 1.7% for the S&P). Investors increasingly appreciate that oil and gas will remain a fundamental part of the economy for the long term, with energy transition likely to be measured in decades rather than years.

2) Core U.S. Drilling Inventory is Being Exhausted More Rapidly Than Markets Perceive

During the nascent stage of “shale” play development, many independent oil and gas companies touted “decades of resource.” After significant growing pains and a boom / bust cycle in 2014-2016+, operators in the current environment better appreciate the duration of their organic drilling inventory. Early development tests demonstrated “proof of concept,” but operators learned that well performance is inversely correlated with spacing density. As a result, oil and gas companies have reduced their total drilling location estimates to mitigate the impact of “depletion risk” from drilling too tightly. In a capital disciplined world, capital efficiency and returns are key, and operators today are prioritizing returns over resource. Today, most public oil and gas operators have less than 10 years of “core” inventory life based on current spacing designs and industry research estimates. These companies will be reluctant to alter their current development designs unless either technology improves or commodity prices significantly increase. In summary, we are likely to experience meaningfully higher commodity prices in the near-to-intermediate term, with global production flat in the absence of significant supply-side growth.

3) Public Markets are Highly Supportive of Further Upstream Consolidation

With “core” inventory life shrinking amongst public operators, energy companies are increasingly using M&A to improve the duration of their asset bases. Virtually every large-scale M&A transaction announced in 2022 was well received by the public markets, with an average one-day stock price performance of +4.5%, and relative outperformance against the XOP upstream index of +3.5%. Private-to-public arbitrage persists, with public companies trading at premiums to where assets are transacting in the acquisition/divestiture market.



Average one-day
stock price performance



Relative outperformance
against the XOP upstream index

While financial accretion is always important to the strategic roll-out of any material acquisition, inventory scarcity and quality are increasingly driving M&A interest from public company buyers. Larger-scale companies benefit from a lower cost of capital, improved access to the capital markets and the ability to consolidate smaller private and public operators at attractive relative valuations. Upstream M&A activity is likely to persist throughout 2023 and beyond so long as markets remain supportive, volatility remains relatively benign, and investors continue to provide public companies with a “green light” to further scale their businesses in a manner that provides accretive returns on their capital objectives.

4) Natural Gas Infrastructure Expansion

Last year saw so much natural gas infrastructure investment that we think it challenges the prevailing narrative that commodities such as natural gas are merely a bridge fuel to a carbon-neutral economy. More than \$7.0 Bn of new natural gas transportation capacity expansions were announced in 2022, all of which were underpinned by long-term (typically greater than 10-year) firm commitments. In addition, investment decisions were finalized on two large-scale, greenfield LNG projects in the U.S.: Cheniere’s Corpus Christi Liquefaction Phase III and Venture Global’s Plaquemines LNG, both of which were underwritten by multi-decade offtake agreements. Couple these domestic natural gas transportation and export investments with the announced investments in Europe to increase LNG regasification by 33% by 2024, and you have greater than \$30 Bn of capital allocation to a sector that is purportedly out of favor. Going forward, we expect continued large scale global investment into natural gas transportation, import and export infrastructure.

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5) Oilfield Services Market Should Continue Recovering

Against a constructive commodity price backdrop, the oilfield service market anticipates increased E&P spending will continue through 2023 – ultimately reaching ~\$550 Bn, which follows an increase of ~20%, or ~\$85 Bn, from 2021 levels. After shale and tight oil investment experienced the sharpest reductions in 2020 (down nearly 50%), it is now expected to undergo the greatest rate of recovery, up nearly 50% Y-o-Y, while deepwater spending should remain resilient. In the U.S., the onshore drilling and completion outlook remains robust, with increasing activity expected throughout 2023. Total U.S. onshore rig count is expected to average ~780 rigs, and pressure pumping demand is anticipated to reach 14.1 MM HHP by year end. As a result, 2023 U.S. oil production is expected to steadily grow to 12.4 MMBbl/d. Offshore activity has increased due to FIDs regaining momentum, with 2023 and 2024 FIDs anticipated to exceed \$100 Bn each year.

Oilfield Services Market Forecasts for 2023



Average total U.S.
onshore rig count



Pressure pumping
demand by year end



U.S. oil production



2023 and 2024 FIDs

Strength in onshore and offshore activity levels, underinvestment in equipment and limited available personnel have resulted in pricing power swinging back to oilfield service companies, with many reaching historically high levels of profitability. Our view is that these factors should support accelerating M&A activity, which has recently trended significantly lower than pre-pandemic levels. ESG initiatives will remain at the forefront for oilfield service companies as their customers seek to decrease their carbon footprints and to expand into energy transition. That's why we expect oilfield service companies to focus in particular on initiatives that improve environmental and operational efficiencies of legacy hydrocarbon development as well as the application of seasoned expertise for clean energy infrastructure development.



6) Energy Transition Investment is Expected to Accelerate

2022 demonstrated that meeting the world's energy needs is a multi-faceted challenge requiring a careful balance between scarcity (availability and affordability), security (resilience against man-made and natural shocks) and sustainability (addressing long-term climate risks). In response, we expect energy transition efforts to broaden and deepen, with an increasing number of approaches targeting goals beyond sustainability alone. Capital availability for energy transition investments is expected to remain high for 2023, as the sector continues to gather momentum. Amid turbulence in public capital markets, the velocity of capital formation on the private side has only accelerated. By some counts, almost \$1 Tn of capital has been raised globally around decarbonization efforts. Top global corporations have formed coalitions like the Frontier advance market commitment and the First Movers Coalition, which have pledged to deploy billions in capital to create markets for clean technologies and products. Additionally, governments are becoming more active: the U.S. Inflation Reduction Act earmarked ~\$370 Bn for climate and decarbonization related projects across a wide range of industries and sectors. The push to Net Zero is unstoppable, in our view, and investors are eager to participate. For all the investor enthusiasm around the energy transition, we do see investors evaluating opportunities with increased scrutiny. There is a continued focus on avoiding technology risk and a strong desire for investing in well commercialized opportunities. We regularly encounter investors that have strict measures around last 12 months or current year cash flows (or, at a minimum, contracted cash flows), which is a marked departure relative to the initial euphoria in 2020 and 2021, when the investor universe was willing to underwrite business stories versus business plans.

These are the dominant trends that we expect to drive energy markets in 2023. But if our careers in energy have taught us anything, it is that the only constant is change. Here at Jefferies, our Energy team is constantly assessing new risks and opportunities in the energy marketplace in an effort to deliver to our clients the insights that will help them succeed.

We thank you for your continued trust and partnership, and we wish you a healthy, happy and prosperous 2023.

Best Regards,

Peter Bowden

Global Head of Industrial, Energy & Infrastructure