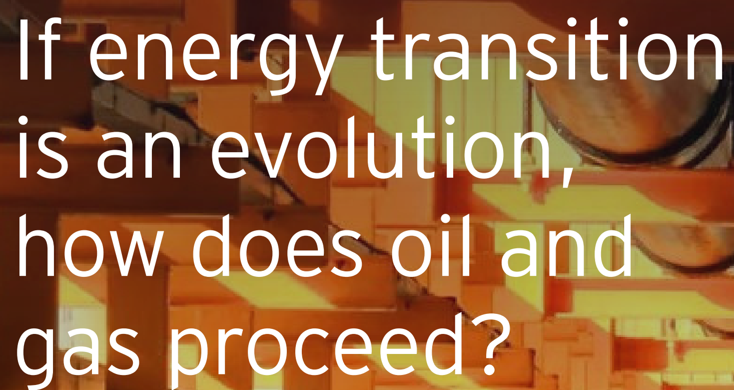

If energy transition is an evolution, how does oil and gas proceed?

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Our annual US E&P Benchmarking Study and quarterly earnings analysis of oil and gas companies illuminates three themes in the industry.

In brief:

01 Oil and gas will continue to play an important role in the energy mix, but efficiency and discipline is key.

02 Companies are investing in their futures with expanded capital budgets, but not at the expense of returns.

03 ESG reporting continues to expand and improve but is primarily driven by social license to operate.

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For several years, investing in the US petroleum sector, and especially in the unconventional oil patch, was out of favor. Even stripping away environmental pressure and concerns about an imminent peak in oil demand, there was a glaring reality facing investors head-on: US oil sector investments were not providing adequate returns.

The leading companies in the US sector responded to the challenge with a relentless focus on capital discipline and durable cost takeout. This attention to the bottom line and returns to investors has paid off, as evidenced in the annual EY US oil and gas reserves, production and ESG benchmarking study, which collates analysis from 2022 financial returns of the 50 largest US oil and gas companies.

Further, these lessons are paying dividends even amid lower prices as evidenced by oil and gas companies' recent reporting of results for the second quarter of 2023. Though prevailing oil prices in 2023 had fallen around 30% from prior-year levels and companies showed lower revenues and earnings. As a result, they were still able to invest in prudent capital budgets and return value to shareholders. This is evidenced more so when comparing their 2022–23 performance to the last time oil prices were in triple digits.

A historical look: comparing prices, earnings and revenues

West Texas Intermediate (WTI) prices averaged almost $93/barrel in 2014; in 2022, the US marker averaged just over $94/b. And in each year, crude oil prices were in triple digits for the first six months before cooling to price levels in the mid-80s for the second half. However, results from upstream operations in 2022 were almost more than triple those of 2014, while in 2022, the tone of the earnings season was one of health, rather than the first signs of crisis seen in 2015.

To be certain, the softening of prices seen thus far in 2023 has been less steep than that seen in the first half of 2015. WTI has averaged $75/b so far in 2023, and just under that in the seasonally weak second quarter — the first half of 2015 saw a US oil price just under $50/b.

We have seen three major trends characterizing the behavior of US oil and gas spending in the run-up to higher prices that continue to pay dividends as markets soften and will help ensure the sector does not repeat the mistakes of the last boom:

- First, there is a clear recognition that oil and gas will continue to play an important role in the US and global energy mix, and companies are prioritizing US assets as core holdings in their exploration and production (E&P) portfolios.
- Second, companies are investing in their futures with expanded capital budgets, but not at the expense of shareholder value.
- Third, ESG reporting and emissions management, in particular, continues to expand and improve, but this is about the ongoing battle to secure the social license to operate and a lens to optimize performance rather than as an attempt to win new and retain existing shareholders.

1

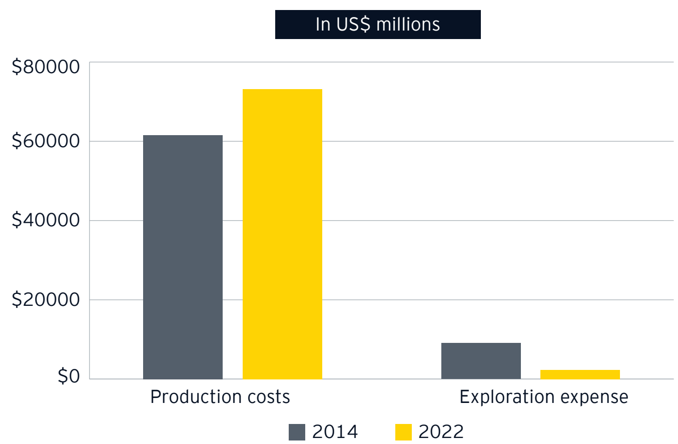
It is safe to invest in the oil patch again

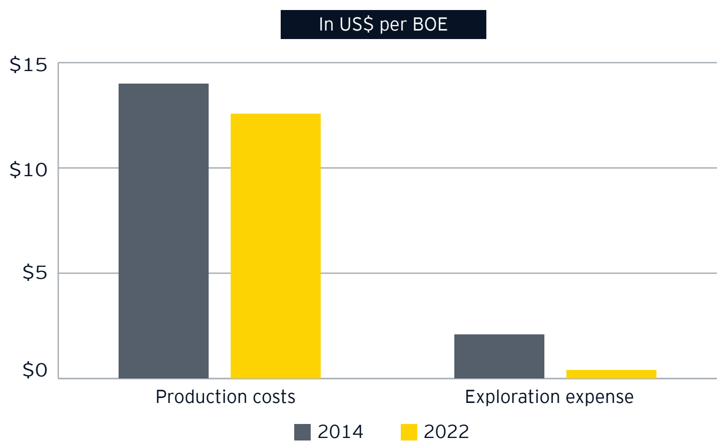
E&P's attention has been on improved efficiency and capital discipline

As demonstrated by our study, 2022 proved a fruitful year for oil and gas. In fact, the top 50 US companies analyzed earned $32.21 (on the basis of a per barrel of oil equivalent (boe)) during the year, more than triple the $10.00 realized in 2014 — the last time oil prices were in triple digits.

Certainly, some of the factors driving this improvement reflected broader market changes , but both the efficiency of exploration and production operations underscored the results of concerted efforts to improve the economics of a core asset for many oil and gas companies.

US production and exploration costs





These bar graphs compare the production and exploration costs this 2022 against 2014, which is the last time commodities were priced at par. Comparisons are being shown in US dollar values and in US dollar per BOE (barrels of oil equivalent).

(a) Includes the 50 largest companies based on 2022 end-of-year oil and gas reserves. Activity related to acquired companies has also been reflected as described in the Appendix.

(b) Includes production taxes and transportation costs for companies that separately disclose these expenses.

(c) DD&A = depreciation, depletion and amortization.

(d) Includes asset retirement obligation accretion and production-related general and administrative costs, among other items, for companies that separately disclose these expenses.

Pre-tax results of operations increased

329%

The 2022 study group recorded significantly higher pretax results of operations than the 2014 study group

On an absolute basis, production costs rose in 2022 to $73b, the highest level in five years, as the study group's total output rose to 8.9 mmb/d (million barrels/day) of crude oil and 42.6 bcf/d (billion cubic feet/day) for natural gas. That did result in some cost inflation, with the per-barrel costs topping $12 for the first time in the past five years. But this compares very favorably to the just over $14/boe cost of production seen in 2014 and demonstrates the ability of the companies surveyed to control costs (even in a much higher general inflationary environment than existed in 2014).

But perhaps more striking has been the greater discipline shown in exploration.

The focus of the industry, even as late as 2014, was on growth, and especially on exploration drilling to prove up reserves to support this continued growth story. To be certain, the sector does continue to further expand the resource base and shows that the top 50 companies added 3.6b boe to US reserves last year, with the bulk coming through the drill bit. Exploration and extension drilling added some 7.5b boe while only 5.8b boe were produced, showing that the sector continues to demonstrate organic growth and a capacity to maintain current record production levels for the medium term.

But more critical for the companies' strategic focus — and reassuring for their investors — is that E&P attention has been on improved efficiency and capital discipline. These additions to reserves were possible despite only a modest increase in exploration spending: $2.8b, up 34% from 2021 levels but significantly below the pre-pandemic years. In comparing 2021–22 to the 2018–19 period, reserve additions through drilling declined slightly to an average of 8.1 billion boe compared to an average addition of just under 9.7 billion boe in the two years prior to the pandemic, a decline of about 16%. However, average exploration expenses in 2021 at $2.1b were only 56% of the $3.8b spent on average in 2018–19. The restraint in activity and the cost discipline led to a significant improvement in the cost of organic reserves replacement and added $1.69 to the per-barrel earnings of the surveyed companies.

But the primary focus has been on operational efficiency. In particular, the development of drilling techniques to allow access to multiple pay zones from a single well bore has resulted in a step-change improvement in operational costs. The relentless pursuit of further well efficiencies and durable cost takeout has paid clear dividends and will help to help maintain the continued resilience of US production even as prices ease into a level well below those seen in either 2014 or 2022.

"We continue to see commentary stress ESG (environmental, social and governance), or scale, or efficiency as the key metric that moves the needle," said Herb Listen, EY Americas Energy Assurance Leader. "But environmental performance, safety, efficiency, scale and operational effectiveness all improve together and ultimately help drive profitability. We are seeing that play out in the US hydrocarbon space."

Redefining the core

E&Ps demonstrate a balanced approach of stewarding their hydrocarbon resources while also investing toward the future of the energy system

This enhanced commercial performance has also meant that US unconventional oil has followed natural gas in proving itself to be a viable, long-term core asset. And this stability comes amid growing investor awareness of the need for further investment in hydrocarbons, even in the case of an accelerated decarbonization of the energy system.

The experience of 2022 showed that investments in US hydrocarbons can quickly deliver energy required, either owing to more rapid economic expansion or supply disruptions in other parts of the globe. The disruptions to energy supplies caused by the Russia-Ukraine war coincided with further production curbs by the OPEC+ group, marking one of the few times since 1973 that a geopolitically driven supply crisis was not met with expanded Saudi output.

To be certain, the energy crisis in the aftermath of the Russian invasion did not erase concerns about climate change or the impacts of the continued and expanded use of hydrocarbons. But it has forced a more prudent mindset among investors and other stakeholders on the longer-term necessity of oil and gas, which coincided with the industry's ability to demonstrate its ability to steward these resources in a manner that also delivered shareholder value, including when prices softened.

At the same time, this commitment to shareholders did not come at a time of retreat from commitments to broader stakeholders. Rather, oil and gas companies are approaching their US operations by demonstrating they can be the best possible stewards of the hydrocarbon resources under their control — including by committing to reducing the GHG footprint of their operations — while also taking up the challenge of programs like the Inflation Reduction Act to innovate and commercialize newer technologies such as carbon capture and hydrogen to accelerate the decarbonization of the energy system.

Consolidation is helping to drive these aims, and some signature deals — such as a major's acquisition of an independent — demonstrate how companies are relying on low-cost and low-carbon intensity assets to complement their overall strategy.

"Specifically, further consolidation is anticipated in the US shale — in order to capitalize on back-office synergies — as well as among midstream companies," said Bruce On, EY US-West Region Strategy and Transactions Energy Leader. "We expect to see M&A activity further increase this year (and even more so in 2024) as the economy stabilizes and expectations begin to converge."

Though individual corporate strategies may vary, a common approach now being adopted is to define both a current and future business that is true to a company's outlook, strategy, capabilities and culture. In so doing, they define a core part of the future energy system they seek to serve. And their articulation of these ambitions has also been improved with the continued enhancements witnessed in corporate ESG reporting.

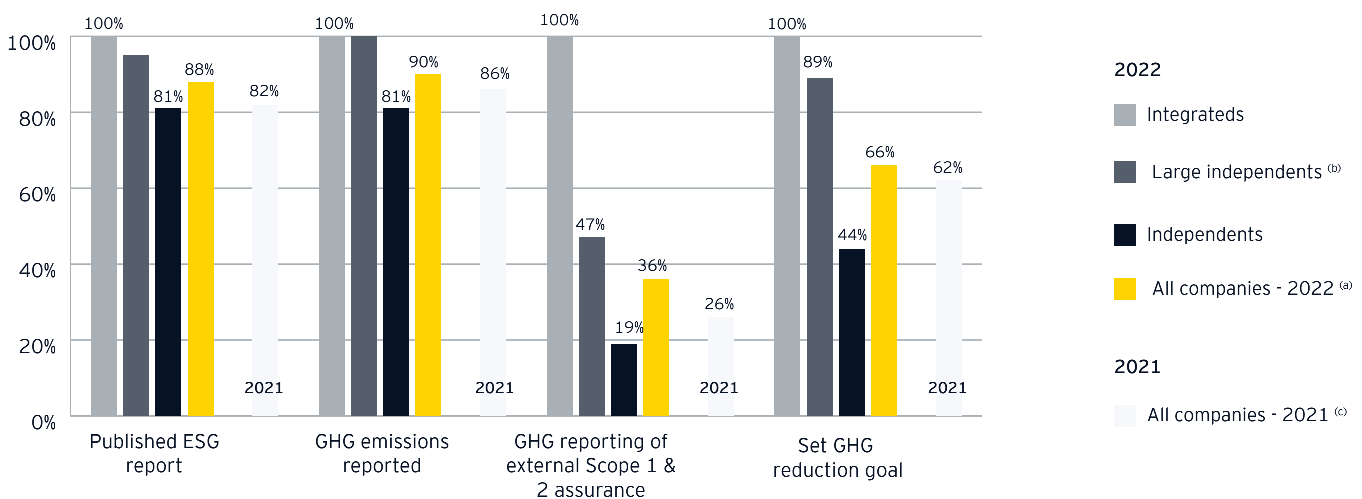
3

Climate commitments come to the fore

The US oil and gas space is set to figure as a core holding for any company intent on producing low carbon-intensive resources

Most US oil and gas companies have reported emissions to US EPA aligned to the GHG Mandatory Reporting Rule since 2010, and the largest US oil and gas companies have voluntarily disclosed GHG emissions information for some time, but requirements and regulations surrounding climate disclosures continue to expand and evolve. SEC requirements were outlined in March 2022 and are a primary focus for US companies, but increasingly, the more expansive requirements of the EU Corporate Sustainability Reporting Directive will impact many of the leading companies in the US petroleum sector.

US ESG reporting



The bar chart shows the percentage of integrateds, large independents and independents that have published a sustainability or ESG report, have reported greenhouse gas (GHG) emissions, have reported their external assurance obtained over Scope 1 and Scope 2 GHG emissions, or have set a GHG reduction goal.

(a) Includes the 50 largest companies based on 2022 end-of-year oil and gas reserve estimates. The data presented here is based on a review of company sustainability and ESG.
(b) Three large independents did not publish a sustainability or ESG report but published GHG emissions data on their websites.
(c) Includes the 50 largest companies based on 2021 end-of-year oil and gas reserve estimates. The data presented here is based on a review of company sustainability and ESG.

Whatever shape the final reporting guidelines take, US hydrocarbon assets can continue to be advantaged even with a greater focus on carbon intensity. Many of the core US oil and gas reservoirs are among the least emissions-intensive oil production globally, and companies continue to make improvements in addressing venting and flaring concerns throughout the sector. But the major operators in the United States are also advancing plans to develop carbon capture and storage projects in the United States, underscored by the recent acquisition of the largest operator of CO2 pipelines by a leading oil and gas company. The reduction of GHG industrial emissions, especially from hard-to-abate sectors, is core to many of these projects but will also present an opportunity to further decarbonize the operations of their own oil and gas operations and those of others in the sector.

"From geologic, production, logistical and geopolitical perspectives, unconventional US oil and gas production will continue to be advantaged from an ESG perspective, notes Ryan Bogner, EY Americas Digital Sustainability Leader. "Combine these structural advantages with significant improvements in other environmental aspects, like drastic decreases in surface water consumption, and you get a business highly resilient to drivers of the energy transition."

Coupled with one of the more open and transparent investment regimes among large oil and gas producing countries, the US oil and gas space is set to figure as a core holding for any company intent on producing the oil and gas requirements for the global economy as the energy transition continues to unfold.

Summary

The persistent pursuit US oil and gas producers have displayed over the last eight years to improve shareholder returns and build resilience – in operations and capital budgets – is proving US hydrocarbons to be a viable core asset amid the energy transition.

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