# Investing in Energy

## Halftime Highlights of the Top 2023 Upstream Trends: The good times keep rolling... Sort of.

**July 20, 2023**

**Raoul LeBlanc,** Vice President, raoul.leblanc@ihsmarkit.com

S&P Global
Commodity Insights

# Key implications:

**We received great feedback after we published our [Upstream Top Trends for 2023](#) back in January. Halfway through the year, we examine how our expectations have fared, what has changed, and where we now appear to be headed.**

**Below we have each of the summarized top trends exactly as published *(in italics)*, then our assessment and current thinking.**

1. ***Not screwing up the (last?) oil boom.*** *Cash will rain down again, but the blockbuster pace of capital returns in 2022 will decline as prices moderate and capital efficiencies erode due to continued service sector inflation and fewer DUCs available to liquidate. Importantly, companies will not "take the bait" and reinvest heavily to grow production. Global capex and project final investment decisions (FIDs) will reach pre-pandemic levels but won't adjust upward to account for the price upcycle, the 2020 investment hole, or the downshift in shale reactivity.*

The industry is sticking to the new business model. In North America, public companies did not revert to growth mode in 2023 or raise budgets significantly above the rate of inflation, choosing instead to continue sending the bulk of free cash flow back to shareholders.

With that said, spending is on the rise again. Our estimated North America capital expenditure of $130B is near an all-time record, but the growth rate is actually lower than 2022 after accounting for steeper base declines and inflation. Globally, the rebound we expected in capital spending has occurred as well; we are back above pre-pandemic levels, and FIDs are the highest they've been since 2014.

Yet as the sense of supply crisis in the wake of the Ukraine war has faded, oil and gas executives have felt increasingly vindicated in their sober response to high prices, and the markets appear to have rewarded that restraint. That lesson – plus the revised executive compensation schemes focused on returns rather than barrels -- should reinforce this newly acquired capital discipline if prices rally again.

Ironically, this fresh rise in oil and gas spending is happening at the same time EV sales around the world are booming. The S&P energy practice believes that the higher-than-expected trajectory of EV sales has moved the date of peak gasoline consumption from a vague event on the horizon to a visible, medium-term milestone. The growing consensus around this, compounded by the weaker-than-advertised Chinese economic rebound, has sapped some of the momentum from oil and gas spending. On the ground, loosening supply chains are also helping to rapidly rein in service sector cost inflation outside of the least reactive sectors (e.g., deepwater services), and S&P sees a mild decline in service costs as we move into 2024.

If anything, the price and cash flow deceleration we forecast for 2023 has exceeded our expectations, with WTI prices flirting with the $60's more than the $80's and gas prices plumbing the depths of the shale glut. We view this unexpected low-price period as the inverse test of discipline: after demonstrating that they could survive high prices (when most fatal errors occur), markets also want to see them prioritize shareholders when cash is scarce. In this regard, the companies have arguably been slow to respond. Henry Hub gas prices have been in the basement for several months, yet most companies have been reluctant to reduce activity levels, with rig counts only recently starting to fall. An attractive forward curve tantalizes and some of those hedges that crushed cash flow last year are helping, but many investors wanted to see a more decisive response to the price drop. Shale oil cash flows have not shrunk to the same degree, but even there our growth expectation remains close to what we expected at the start of the year.

## 2. *Right or wrong, it is tough to bet on long-term oil.* *The growing uncertainty around the trajectory of long-term oil demand tends toward less greenfield exploration and more exploration of green businesses. As governments and industry both accelerate promises of net zero, the perception of the risks to the future of oil and gas profitability rise.*

This long-term trend continues. On a worldwide basis, bid round activity could be said to be steady, but unspectacular; there are new bid rounds, but they do not appear to be a direct response to 2022 success (which was the best year in terms of discovered volumes, ~22 bn boe, since 2015). While we would expect to discover "super basins" perhaps only every 5-7 years, 1H2023 has strikingly bad for exploration and high impact drilling, with no discoveries over 500 MMboe recoverable and only 2.3 bn boe announced as discovered by July 1st. NFW drilling activity has stayed largely in line with the "trough" years of 2020-22. Companies continue to focus and high-grade their positions in basins where they – or others - have achieved past success.

Companies continue to focus on creating larger positions in those basins in which they already operate. Speculative shale resource leasing is not occurring, but existing shale drilling continues to be highly competitive in the portfolios of companies that possess global optionality.

Furthermore, the narrative of the end of oil should continue to gather strength as the prospect of peak transport fuel described above becomes consensus. Meanwhile, the IRA subsidies survived their first (if tepid) challenge during the debt ceiling standoff; their impact in terms of steel in the ground is still elusive, but the commitments to massive spending have continued to mount in the first half of 2023.

In the near and medium-term, however, the situation is very different. Oil and gas supply is not underinvested. OPEC's continuing cuts are a reaction to this reality. As we noted in our research last year, supply was setting itself up for strong growth as a number of factors converged:

i. A number of long-term, non-OPEC projects were not derailed by the pandemic and are showing up. The main drivers (Canada, Guyana, Brazil) have been visible for many years and this should surprise no one.

ii. As illustrated in the international rig count, some portion of the 2021-22 oil windfall has flowed into brownfield redevelopment and maintenance in mature basins (Latin America in particular). This is boosting supply by reducing base decline broadly across producers who never make the headlines.

iii. FIDs have bounced back sharply from their 2020 collapse and now exceed the pre-pandemic level. Most of these will be smaller, quicker projects that can deliver volumes within a few years.

iv. Finally, while markets have decisively changed shale's growth trajectory, US oil supply has continued to expand materially, with the US posting a million barrels per day of growth between April 2022 and April 2023. We expect a slowdown in 2H2023, but the fact remains that the shale sector still has a role in driving global oil balances and prices.

### *3. **The new pricing rules create a playing field between $70/bbl and $120/bbl WTI. Less energy price panic and more acceptance of "higher for longer."** The global oil market continues its search for a new, reliable price formation mechanism as the 2015-2019 model—in which shale delivers all marginal barrels below $60/bbl—has disappeared. Finding the new mechanism and equilibrium will take time and the road will be bumpy. Yet we believe the market is learning about how supply and demand react at different bands of oil and gas pricing.*

During the first half of 2023, the market has explored the lower end of this band, effectively looking for signs that a series of soft floors will act to keep prices sustainably above $70. In particular, last summer we noted three particular forces supporting prices: 1) Shale reactivity. As noted above, this has exerted a weak influence, as producers have not made any bold moves. 2) US SPR repurchasing. While not a structural factor, the impact of a multi-year refill would provide a meaningful fillip to demand and tighten balances. However, the US government has been very tentative on the subject, leading the market, in our view, to heavily discount the presumed support. 3) OPEC cuts coming at higher prices. The group has continued to decisively manage supply, supporting prices and a consensus view of oil market deficits in 2H2023 and 1H2024. OPEC's new aggressiveness and proactivity align well with our read of the evolution of the organization through the pandemic years.

Questions around long-term supply viability remain. We are engaged with our client base in quite a bit of discussion on the realities of supply, and especially the potential for stranded barrels due to cost, carbon intensity, regulatory action, etc. Surprisingly, there is an emerging argument that notes that the non-OPEC+ new source volumes that are helping to keep oil markets currently subdued relate to FIDs taken when scrutiny on global oil and gas investment was less intense. This leads to a motivation to bet (or secure options) on a big price spike if the industry does not invest outside of core areas such as North American shale, Saudi etc. which have not only the resource but also a track record of delivery.

### *4. **"I'm not dead yet": Shale refuses to go on the cart and the sweet spot exhaustion story is overdone.** At WTI prices above $85/bbl, US shale outperforms the current (low) growth expectations. Even limited to less than 320 completion crews, the industry can deliver 700,000+ b/d of entry-to-exit growth for the next several years. Furthermore, our analysis suggests that well quality degradation is limited to the Eagle Ford, with other areas unable to improve much but maintaining recent productivity levels.*

So far, our view that shale can and will grow – though modestly – is playing out. Production has moved meaningfully higher over the past several quarters. Our forecast entry-to-exit growth of 700,000 b/d by the end of 2023 was derived using an $85 WTI price. Despite prices averaging substantially below that level, the data through May suggest that we are just 250,000 b/d shy of the EOY mark.

Just as importantly, we believe that it does not take much for shale growth to evaporate, given the intensity of the base decline and the amount of capital necessary just to stand still – $70 WTI is now a key psychological threshold. We believe that growth decelerates rapidly if budgets are recalculated as prices slide toward $70 WTI. Sustained prices below $65 should lead to a slow decline in US crude oil output. Gas is more stubborn due to associated gas volumes, but we also view prices in the $2.50-$3.00/MMBtu range as necessary to sustain output.

We still see plenty of life left in the major shale plays even as they show signs of aging. As readers of our research know, we believe that per-foot well productivity in all the backbone plays stagnated from the end of 2018, and that sweet spot exhaustion is a fact in the Eagleford, imminent in the Bakken, and close in the DJ/Wattenberg. However, our analysis shows an evolutionary slowdown rather than a precipitous drop in these plays; and even with fewer great wells available, the most important driver is price. Spend enough money and virtually any play can grow, at least temporarily.

Pessimism about the Permian, in particular, is overdone. There are problems, and we recently published work on the relatively low "core of the core" inventory of selected areas and players. And it is true that virtually everyone would like to secure a better and deeper inventory of undrilled wells. But that is more a function of equity market preferences and the almost complete lack of new resources being discovered and commercialized. While we continue to see years of growth left in the Permian at the right price, it is true that everyone is suffering from the "shrinking box" problem: the repository of de-risked locations is not growing any more, and each day the drilling program shrinks the box.

### 5. ***North Americans and NOCs push harder on energy transition investment but stay close to core skillsets.*** *Meanwhile, the divergence of the aspirations and portfolios of European IOCs continues to grow. All sides of the energy transition debate are interpreting the upheavals of 2022 as validating their view of the need for change. In reality, everyone is in a better spot than a year ago and is moving faster.*

Our expectation of a widening gap between the Europeans and American approaches to energy transition missed the mark. Both BP and Shell have made public announcements about slowing the speed of transforming their asset bases and taken a tougher stance on the profitability levels of new energy businesses partially in response to share price underperformance relative to their US-based counterparts and the proposed changes have been received favorably by investors. Despite these announcements, the growth rate of investment in low carbon business lines by the Global IOCs, both organic and inorganic, will continue to vastly outpace that of the Upstream business, albeit from a much smaller base. Portfolio shuffling is also occurring, with a trend toward NOCs purchasing assets to secure feedstock for refineries as reserves back home decline.

One of the hindrances to a faster pace of transition is that oil markets are not (yet?) recognizing any premium on low carbon crude despite emissions intensity now being baked into indices. Therefore, the rewards are elusive apart from ESG reputations, cleaned-up portfolios and lower operating costs (in theory). Advantaged hydrocarbons are still relatively cheap in the marketplace, and we are seeing some substantial international gas-driven deals/proposals (Neptune Energy, New Med Energy).

That said, the overall direction of travel remains clear and the attractive profitability of oil and gas in 2021-22 has not led to a wider pivot in social or market preferences, or overall corporate strategies. From the upstream perspective, perhaps the best way to view the impact of the pandemic and subsequent commodity crunch is that it showed the value of oil and gas assets, but also provided the owners of those assets with sufficient cash and financial power to make investments in new energy assets. One of the trends we saw at CERAWeek 2023 was a more open and thoughtful approach toward transition-related investments by North American independents and others that had previously made limited forays into that arena. With their existential crisis over and funds available, they are studying the menu.

Predictably, and sensibly, the North American independents are hewing close to their skill sets with a decided focus on CCUS, LNG, and Hydrogen (in contrast to the European majors who have diversified into areas such as renewable power generation and EV charging). In addition, they are taking action on methane emissions reduction, prioritizing "no-brainer" solutions such as Leak Detection and Repair (LDAR), pneumatics replacement, etc. as they seek to take credit for any low-carbon production. Emissions are falling, and we are seeing successes and failures; however, tougher decisions, higher costs and trade-offs await.

## 6. ***Buy 'em back.*** *With balance sheet repair done and regular dividends re-established, companies will increasingly favor the flexibility and perceived permanence of share buybacks over special dividends, acquisitions, and increased capex.*

The Global IOCs have maintained their commitment to increasing repurchases in 2023 by using their significant cash on hand to cover any shortfalls. On the other hand, share buybacks by North American E&P firms have tapered off as sagging prices and free cash flow diminished companies' capacity to repurchase large amounts of shares. The rationale and desire for buybacks has generally endured as trading multiples in the equity markets remain significantly lower than in other industries. However, as would be expected in a period of eroding cash firepower, the relative attractiveness of dividends has risen. Of the 10 large independents, the share prices of those offering a balanced or dividends-centric approach are down 7%, while those focusing on shares are off more than 20%. Of course, a number of critical variables feed into that: asset portfolios, oil vs gas balance, inventory depth and quality, the role of variable dividends, and the previous year's performance, to name a few. However, it seems fair to say that buybacks – and really all return-of-capital strategies – have naturally lost some of their luster as the volume of dollars to be returned has shriveled.

Importantly, upstream companies are also continuing to devote significant dollars toward acquisitions. In particular, those with higher multiples are seeking to expand their "inventory box" and continue to acquire scale via targeted acquisitions. The deal count is down this year, with ~60 transactions in 1H vs 150 in 2022. The smaller number likely reflects fewer available targets (especially in prime acreage) and a push to bigger deals.

At a more structural level, the root cause of the upstream oil and gas valuation gap remains a subject of debate. One camp highlights the industry's poor track record of the past ten years and the loss of conviction among investors that the oil and gas business can remain disciplined and continue to prioritize the interests of shareholders. According to this faction, the industry is still in the process of regenerating that confidence, and once that has been achieved the trading multiples will normalize, or at least move much closer to those of other industries. On the other side lies the argument that the energy transition and the inherent, unavoidable volatility of the industry mean that the multiple should not and will not be commensurate with other industries with a more certain future and less cyclicality. Both objections are likely responsible for the current low valuation; the question is whether the discount can be fully resolved. In both arguments, share buybacks continue to make sense for the short- and medium-term, though they might diverge in the long-term should a re-valuation of the sector occur.

## *7. **Looking for a piece of the global LNG bonanza.** The explosion of LNG prices in 2022 and the drive to disconnect Europe from the lifeblood of Russian gas is impacting portfolio decisions across the upstream sector.*

This trend remains intact. LNG prices have returned to earth from the stratospheric levels witnessed in 2022, and there has even been a rising consensus of a glut later in the decade as major US and Qatari liquefaction capacity comes online in 2026-27. However, that has not stopped companies of all stripes from seeking to jump into the business. In particular, North American producers continue to look longingly at LNG landed prices in Europe and Asia (versus the $2 Henry hub gas price they have had of late). This arena is a dream for game theorists, with a host of projects jockeying to squeeze out others and cement themselves as one of the survivors.

From our standpoint, two changes have occurred in the LNG discussions in the first half of 2023. The first has been the increasing questioning of the adequacy of the shale resource to meet the expected leap in demand from liquefaction plants. Customers have repeatedly engaged the S&P Commodity Insights research team to help them quantify and understand

a. whether The US system can realistically produce enough gas,

b. from which areas or plays it would most likely come, and

c. how deep into the inventory of marginal (Class 4 and 5) wells we will need to dip.

These are complex issues, of course, but an important conclusion from our research is that the Haynesville play, which spans Texas and Louisiana and is near Gulf Coast export terminals, will not be able to meet the longer-term incremental gas needs by itself. Either new resources need to be de-risked (limited, to date, to small-impact fringe activity) or we will need to revisit legacy plays in the mid-continent and western US with ready access to existing interstate infrastructure in search of acreage with breakeven prices of $4 and above to fill the plants reliably. In short, the LNG market is coming to terms with the fact that the three ultra-cheap upstream sources that transformed the US from a large importer to a massive LNG export source cannot (fully) deliver the volumes to which the LNG market aspires at the marginal cost (~$2.00-2.50) that has attracted buyers for the past decade. Each has its own impediment:

a. Associated gas growth has been tamed by the slowdown in oil supply expansion.

b. Appalachian gas will remain trapped by infrastructure constraints unless East Coast liquefaction can somehow beat the odds.

c. The long-term consequences of the complete lack of new gas play de-risking since the Marc-Utica will make its presence felt. With a few limited exceptions, low gas prices have simply not offered the rewards necessary to motivate producers to chase new gas reservoirs. As a result, other than the Haynesville, the gas shale plays accessing the Gulf Coast are deep into exhaustion. The potential for re-inventing shale remains high as recovery factors remain below 20% for the 30,000+ old unconventional gas wells. However, we do not see many viable candidates on the technological front that could have an impact this decade.

The second change in gas market discussions has centered around how companies can structure protection from price volatility and achieve market pricing diversity. In the Permian, operators are searching for ways to protect themselves from low Waha prices via either increased Mexico exports or direct links to end users to capture more of the value of their molecules. Haynesville and Mid- Continent operators are also seeking direct links to international buyers and contractual mechanisms to capture more of the value of their gas via commercial arrangements leveraging the LNG space. All this is leading to the emergence of new players in the LNG market but not in the ownership of LNG chain businesses.

## 8. ***"We must carbonize before we decarbonize."*** *Producing countries in the developing world will become more vocal in the debate over the energy trilemma (clean vs. secure vs. affordable) and on their plans to leverage their hydrocarbons for development. Gulf countries/NOCs will position themselves as winners in all three dimensions.*

This debate has, if anything, become more mainstream. As we already saw at CERAWeek 2023 – and as we will continue to witness in the buildup to the COP climate conference in Dubai later this year – developing countries are bringing an "all of the above" strategy to energy. Energy security fears have faded over the last year, but the financial, employment, and investment benefits that accrue to countries from developing their oil and gas resources remains a powerful lure. African NOCs are clearly on this path, with a 'social license' approach to energy production as a path to improved economic growth.

Developed countries' failure to follow through on pledges to provide billions of dollars in energy transition financial support to poorer countries will only provide more impetus for them to develop their fossil fuel resources, especially as governments seek new sources of cash to repair their finances after running large deficits to combat the pandemic.

In the run up to COP28, we would expect the mainstream press to highlight this issue and to link it to the increased role of the oil and gas producing companies and countries at this year's meeting. However, ironically, the issue may be becoming less controversial within the countries for whom it matters. Indeed, the issue may be academic for some: the largest obstacle to realizing these resources is the difficulty in finding aligned partners, risk capital, and sustained project execution expertise. For those with frontier resources, the opportunity may have permanently disappeared.

This dynamic is affecting NOCs at a strategic – perhaps even existential – level. The raison d'etre for most NOC's has been to maximize the financial benefits of resource development, improve energy security, and grow skills and industry. Quite a number of NOCs have spent the last 5 or 10 years reacting to a shrinking investment level and reduced interest. Thus, as they increasingly remind the world (rather than apologize) that it needs more oil and gas, they are also having to adopt a more proactive approach to that development.


**CONTACT US**

ci.support@spglobal.com

**spglobal.com/commodityinsights**

about/contact-us.html

**North America**
+1 877 863 1306

**EMEA**
+44 20 7176 1234

**Asia-Pacific**
+852 2533 3565