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FundamentalEdge 3Q21

Five-Year Supply, Demand and Price Outlook

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FOCUS

What is Enverus' latest oil, gas and NGL outlook for the medium term?

KEY POINTS

- We estimate oil prices will average in the high-$70s for 4Q21, reflecting OPEC's restraint in capping the oil price rally and demand-driven tailwinds. We now expect OPEC to defend Brent in the $70s rather than $60s in 2022 before slipping to $65-$70/bbl in the medium term. Above these prices, the risk of demand erosion and accelerated transition away from oil remains high.
- We believe U.S. production will grow ~ and ~ exit-to-exit in 2021 and 2022 before moderating in the medium term to per year. We reaffirm a strong production ramp in 2022 but reduced our outlook slightly from previous months, reflecting more emphasis on capital discipline. An increase from today's ~430 oil rigs to ~480 by mid-2022 spurs the growth.
- We think the Permian continues to accelerate, accounting for ~96% of 2022 exit production growth before moderating to 140 Mbbl/d per year thereafter. Private operators, running nearly half of horizontal rig activity today, are closing the historical well productivity gap relative to public peers and remain the ones to watch in the near term.
- At higher prices, investor calls for capital discipline evolved to absolute cash returns versus reinvestment rate targets. In the absence of concrete 2022 guidance, we assume the independent public space broadly holds to capital discipline with mid-single-digits growth while private operators and supermajors grow 10%-15% in the near term. Reinvestment rates fall from last quarter's mid-50% to low-30% as a result, although U.S. capex still increases by ~10% on top of ~10% OFS cost inflation.
- North American gas markets head into winter without much cover against colder-than-normal weather with: storage inventories ~150 Bcf below five-year averages, weather-normal injection rates 1 Bcf/d below norms, coal-fired power plants at capacity and global gas prices too high for economically feasible cuts in U.S. LNG feedgas demand.
- Recovery in U.S. LNG exports in 2021 helped push gas prices up this year. New capacity at Calcasieu Pass and Sabine Pass, combined with a muted supply reaction, keeps gas prices at ~ in 2022. In a normal winter, the ~4 Bcf/d of exit-to-exit production growth we expect should allow storage inventories to approach five-year averages by year-end 2022.
- In 2023-24, the pace of liquefaction build eases, causing weaker Henry Hub prices in the low- range and allowing gas to resume taking market share from coal in domestic power generation. By 2025, we expect liquefaction development to accelerate again, pushing up Henry Hub prices and requiring higher drilling levels in gas plays, mostly the Haynesville.

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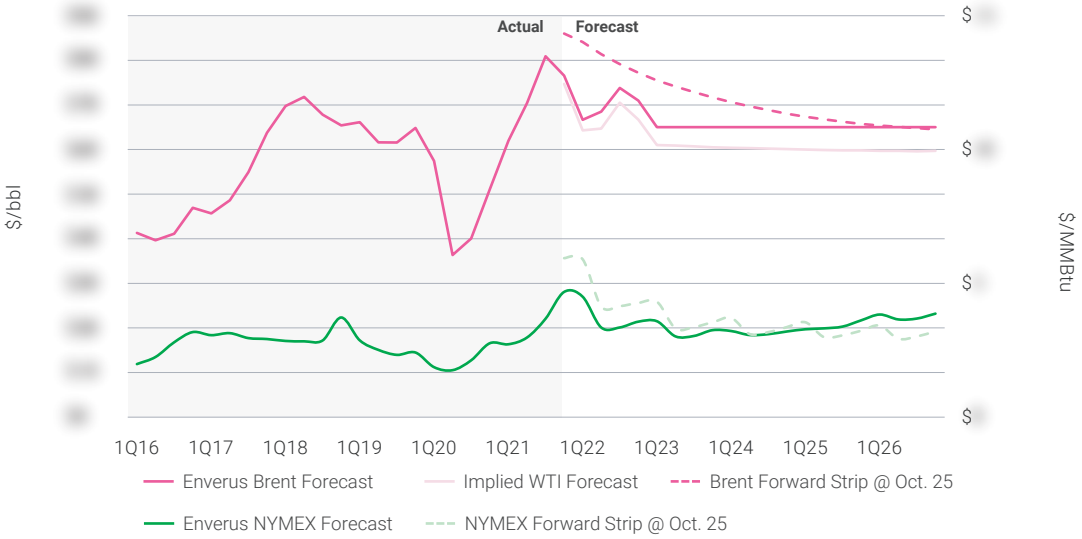
SUMMARY

Since our last FundamentalEdge published in late July, the 12-month WTI strip rallied from ~$65 to $77/bbl, and Henry Hub prices jumped from $3.15 to $4.50/MMBtu. Because North American oil and gas producers heavily hedged volumes they'll produce this year, the impact on cash flows is muted. However, prices for both commodities also strengthened further out the forward curves, setting the stage for a range of decisions during planning season. Prices are better than they have been in years, yet equity markets don't value growth and cost inflation is rising. We expect 2022 to play out along established 2021 lines — private operators should still deliver nearly ~15% growth holding close to current rig levels, public operators will remain disciplined delivering ~5% and supermajors come in at ~10% exit-to-exit. Beyond 2022, growth rates slow as base declines accelerate.

The boost in oil and gas prices reflects not only justified expectations of more disciplined capital allocation in the upstream — as reflected in public operator growth rates — but also extremely tight global energy balances heading into peak heating season. This year brought a transition to higher commodity prices and higher volatility amid the broader energy transition toward zero-carbon technologies. Enverus expects oil and gas production growth to outpace demand growth in 2022 and 2023 — a return to normal weather conditions in key markets and a recovery in upstream activity levels this year will restore some balance — yet operators should plan for shorter cycles in prices. Enverus expects calendar 2022 and calendar 2023 Henry Hub prices to average $ and $, with WTI prices expected to trade at $ and $ (**Figure 1**).

FIGURE 1 | Price Outlook



Source | Enverus, CME

SUMMARY (2/2)

Gas headlines the tight energy markets, with record-high prices in Europe and Asia, and the highest summer North American prices in the shale era. Global gas demand recovered above pre-pandemic levels, but supply hasn't caught up due to steep capex cuts across the upstream space in 2020. In both domestic and global energy markets, this year delivered a wake-up call: the mismatch in gas supply and demand triggered a weakening in storage inventories, a rebound in coal-fired generation and an increase in global emissions. Investments in zero-carbon wind and solar capacity are accelerating rapidly, but this year shows that zero-carbon generation not only requires dispatchable backup supplies, but also that these fuels are not ramping up quickly enough to ensure reliable energy supplies with current low fossil fuel investment rates. With gas a lower-carbon option versus coal, high global prices will keep U.S. liquefaction facilities running full and support additional North American LNG final investment decisions built on a low-carbon gas value chain.

Current global gas prices are high enough to incentivize some substitution from gas to liquid fuels. Oil demand isn't yet back to pre-pandemic levels, but the recovery in transportation use as the delta wave of COVID-19 wanes and some added power and industrial demand gained at gas' expense ease OPEC's role defending the oil market. An expected bounce-back in jet fuel demand through the balance of 2022 will keep the recovery going. Yet long-term questions remain, and although 2021 likely extends gas' room for growth, long-term oil demand growth prospects remain challenged.

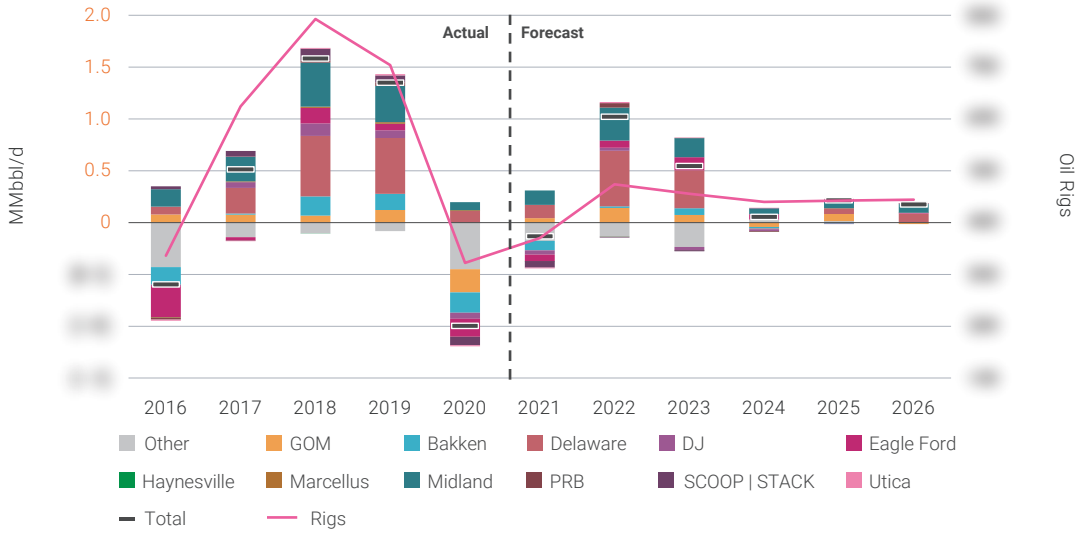
SUPPLY

Non-North American oil supply recovers only slowly, underpinned by a reduced forecast for **Iran** underpinned by a reduced forecast for Iran given uncertainty around nuclear talks, non-OPEC production weakness particularly in **Mexico** and slow OPEC production recovery due to shortfalls in Nigeria and **Angola output**.

The non-OPEC, Canada, America and Russia (NOCAR) supply outlook is steady through 2026. We expect near-term production to increase from present levels before peaking in 2025 at ~ [illegible].

OPEC shows no signs of wanting to arrest the price rally ahead of weaker balances in 1H22, and the resulting strong prices set up an increase in market share for North American liquids. We believe U.S. production will grow [illegible] and [illegible] exit-to-exit in 2021 and 2022 before moderating in the medium term to between [illegible] per year (**Figure 2**). We think the Permian accounts for ~96% of 2022 exit production growth before moderating to 140 Mbbl/d per year thereafter. Private operators, accounting for ~45% of horizontal rigs running today, are closing the historical well productivity gap relative to public peers and remain the ones to watch in the near term. Emerging plays in growth mode, record production out of the oil sands and high prices supporting flat production profiles of previously declining conventional plays keep Canadian production steady, an upgrade from the decline we expected previously. Medium term, production grows ~3%, at ~ [illegible] exit-to-exit per year, as operators continue to focus on boosting cash flows.

FIGURE 2 | Average Oil Production Growth and Rig Counts

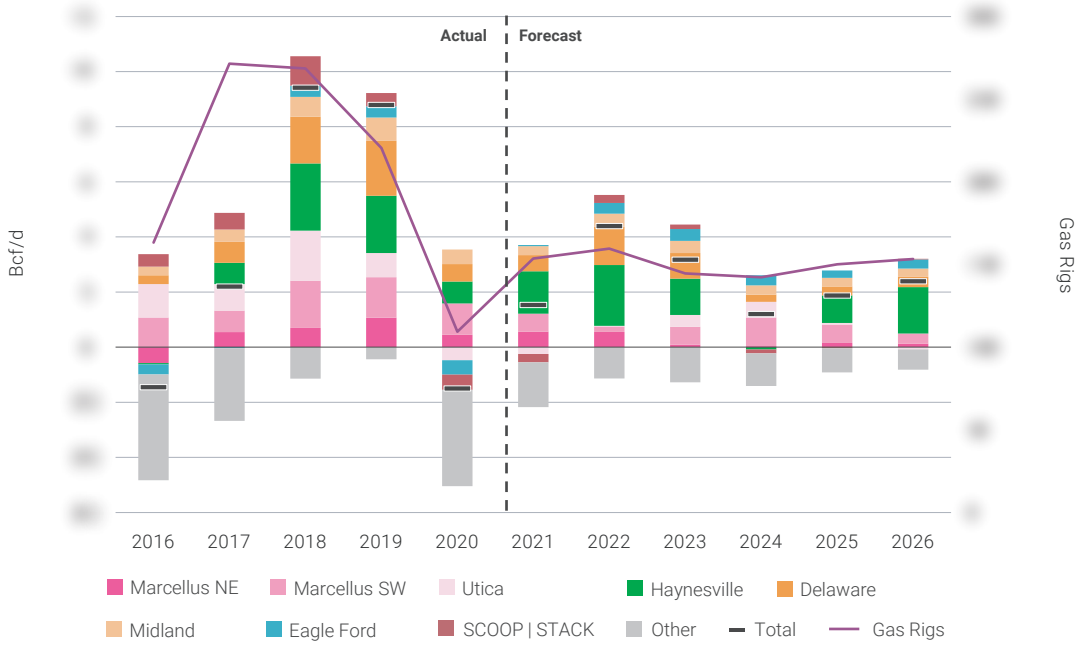


Source | Enverus ProdCast 3.0

SUPPLY (2/3)

Dry gas production growth of [illegible] Bcf/d exit-to-exit in 2022 remains concentrated in the Haynesville and Permian, which add [illegible] and [illegible] Bcf/d to exit 2021 volumes, offsetting declines elsewhere (**Figure 3**). Moderation in oil-weighted activity slows Permian volumes to less than [illegible] Bcf/d growth exit-to-exit per year thereafter, while the Haynesville's growth trajectory follows the LNG export outlook, ebbing in 2023-24 and accelerating in 2025-26. In the years before LNG Canada comes online, Canadian midterm gas production remains subdued as Montney growth is outpaced by declining production in conventional acreage and the Duvernay.

FIGURE 3 | Average Gas Production Growth and Rig Counts



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