

A photograph of an industrial refinery at night, illuminated by warm lights against a dark, cloudy sky. The scene features complex piping, scaffolding, and large storage tanks. A prominent yellow banner is overlaid on the left side of the image.

EY Price Point: global oil and gas market outlook

Q4 | October 2022

The EY logo, consisting of the letters 'EY' in a bold, white, sans-serif font. A yellow diagonal bar is positioned above the 'Y'.

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Q3 in review

In the third quarter of 2022, inflation, expectations regarding central bank policies, and the fallout on the global macroeconomic environment took center stage. At the end of September, contracts for Brent crude were trading at US\$85/bbl and US\$79/bbl respectively with a definite downward trend. At the beginning of the quarter, those contracts were trading at US\$120, and US\$108. Notwithstanding that trend, multiple short-term headwinds and the longer-term uncertainties related to energy decarbonization, the prices of crude benchmarks remain above levels seen between the 2014-2015 downturn and the coronavirus pandemic.

Much of the pressure on crude oil prices can be attributed to the strength of the US Dollar relative to the currencies of other large oil consumers. Since the beginning of the quarter, the Euro has lost 10% of its value relative to the US Dollar and the Pound Sterling has lost almost 17%. There is no way to know how long that trend will last. The UK and EU governments continue to struggle with the fallout from the war in Ukraine and the effects on energy affordability. Nationalization initiatives and direct support to energy consumers will put a continued strain on already stretched budgets, and we can expect pressure to monetize those deficits.

US gas markets tested the \$10/MMBtu mark again this quarter on increased power sector demand and LNG continues to trade below record highs seen in the wake of the Nordstream shutdown but above levels that are sustainable. Crack spreads ended the quarter at elevated levels but less than half of where they peaked in early June, when inventories fell to dangerously low levels.



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Q4 theme

The theme for this quarter is **apprehension**. In September, the US Federal Reserve announced a third 75 basis point increase in the federal funds rate. In the aftermath, the two-year treasury rate reached the highest level since before the 2008 financial crisis and the spread between two and ten-year rates went below negative 50 basis points for the first time since the early eighties. Equity markets have begun to price in the likelihood of a recession and, if history is any indication, the impact on oil markets could be profound.

WTI prices fell by over 50% in the last two recessions, but recession is not a certainty. Employment data indicate continued strength and if the global economy does contract, structural underinvestment in every link of the petroleum value chain since the 2014-2015 downturn may get in the way of significant supply overhang. OPEC members have consistently underproduced against their quotas in recent months and the organization recently announced production cuts. The official sanctioning of Russian oil by EU countries later this year and the possibility of reduced exports also provide something of a hedge against muted demand.

In Europe, there is no sign of a future in which natural gas shortages and unprecedented energy bills become a memory. The war in Ukraine continues and withholding gas supplies appears to be a pillar of Russia's strategy to influence European public opinion. Government response to the crisis: price caps, windfall profit taxes and utility company nationalization is mostly palliative and the financial market reaction has resulted in currency depreciation and worries about a ratcheting up of inflation and ongoing economic troubles. In the US gas market, prices are supportive of new investment but a major LNG export project has been put on hold for lack of offtake contracts.



- Will interest rate policies engineered to reduce inflation tip the global economy into recession?
- If there's a recession, how much will it impact oil and gas demand and will reduction in Russian supplies and OPEC production discipline be enough to keep the market in balance?
- Will Europe's response to the threat of reduced Russian natural gas supplies be enough to keep the economic impact at tolerable levels and the hardship to people at a minimum?

Macroeconomic uncertainties dominate

Whatever doubt that the markets had about US central bank determination to bring inflation back to pre-pandemic levels has been erased. Fears of recession have begun to dominate the narrative and risk to oil and gas markets is heightened.

Product market pressures ease

The spread between gasoline, heating oil and crude oil prices reached record levels as feedstock and product mixes adjusted to the loss of Russian refining capacity. Pressures appear to be easing as trade flows continue to adjust.

European energy crisis lingers

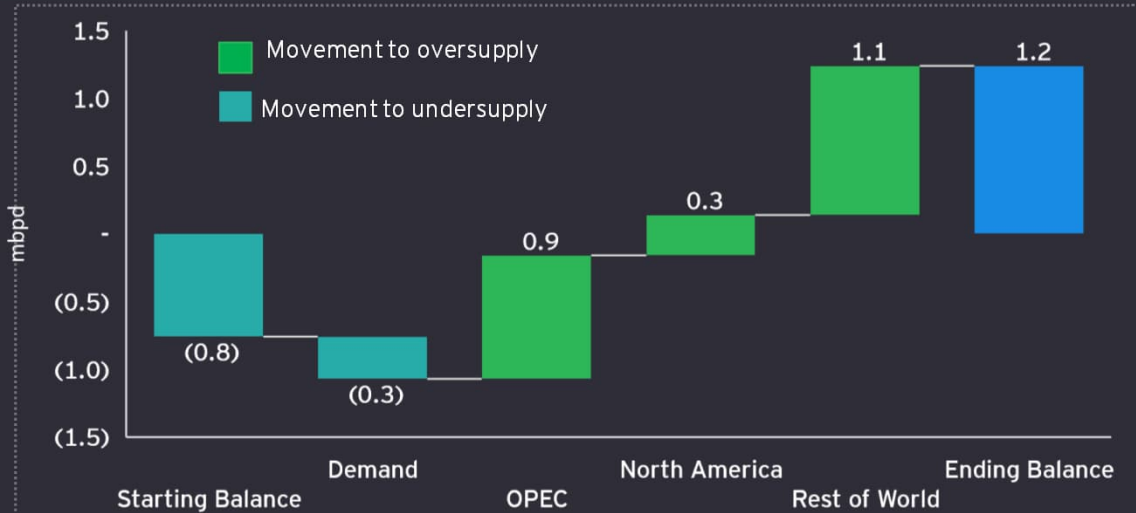
Interruption of gas supplies from Russia has become regarded as a certainty rather than a risk. Shortages, elevated prices and government response are bound to affect the economic outlook.

Inflation Reduction Act alters the landscape

In August, Joe Biden signed the Inflation Reduction Act, a bill that allocated more than US\$300 billion toward energy transition and climate change initiatives. Among the provisions are large increases in tax credits available to direct air capture developers.

Market fundamentals

Oil market balance tilts towards surplus



Source: EIA

- From the beginning to the end of the third quarter, crude oil prices fell 17%, with WTI moving from just over US\$100/bbl to just over \$US80/bbl. As always, a variety of factors were at work, including real-time balance between supply and demand, inventory levels and traders' assessment of demand growth and the capacity (and willingness) of producers to increase or decrease output.
- Crude oil demand increased marginally with increases Canada, US and Europe offset by muted growth in China due to continued commitment to zero COVID. Although official forecasts show growth in Q4 as China emerges from lockdowns, uncertainty looms as recession fears grow.
- Crude oil supply increased by 2.3 mbpd driven by across-the-board increases. In the here and now, drilling economics would seem to favor increased production, but OPEC producers have undersupplied against their quotas in recent months and capital discipline and reassessment of strategies continue to govern non-OPEC investment in new supplies.

High interest rates may impact oil demand and deal volumes

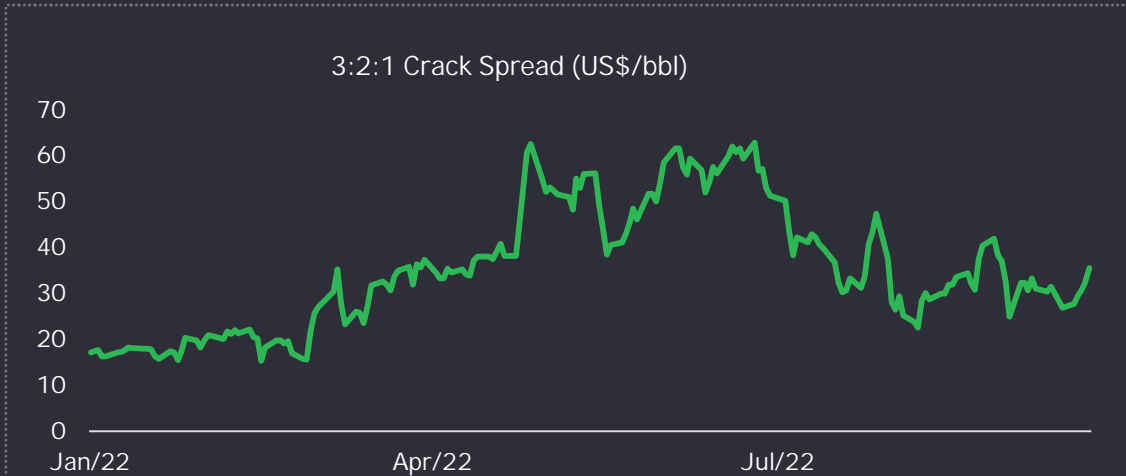


Source: Capital IQ

- Central banks across the globe are committed to reducing inflation. In September the US Federal Reserve raised its official short-term rate for the third time in as many months by 75bp and the European Central Bank followed suit. Less apparent, but equally important is the growth in money supply. Since January, the most commonly used measure of liquidity in the economy, M2, has been essentially flat.
- Signals that the policies are working and clues as to when monetary policy will ease are hard to find. The last readings on consumer prices showed a 8.3% year over year increase in the US and a 9.1% increase in the Eurozone. Unemployment rates (3.7% in the US and 6.6% in the Eurozone) reveal no sign of economic cooling.
- It is inevitable that tight money will impact commodity prices and deal activity in the oil and gas sector. Oil prices are elevated but falling as traders assess the likelihood of recession and falling oil demand while deal volumes, which have been supported by cheap short-term financing, are down 35% in the third quarter of 2022.

Market fundamentals

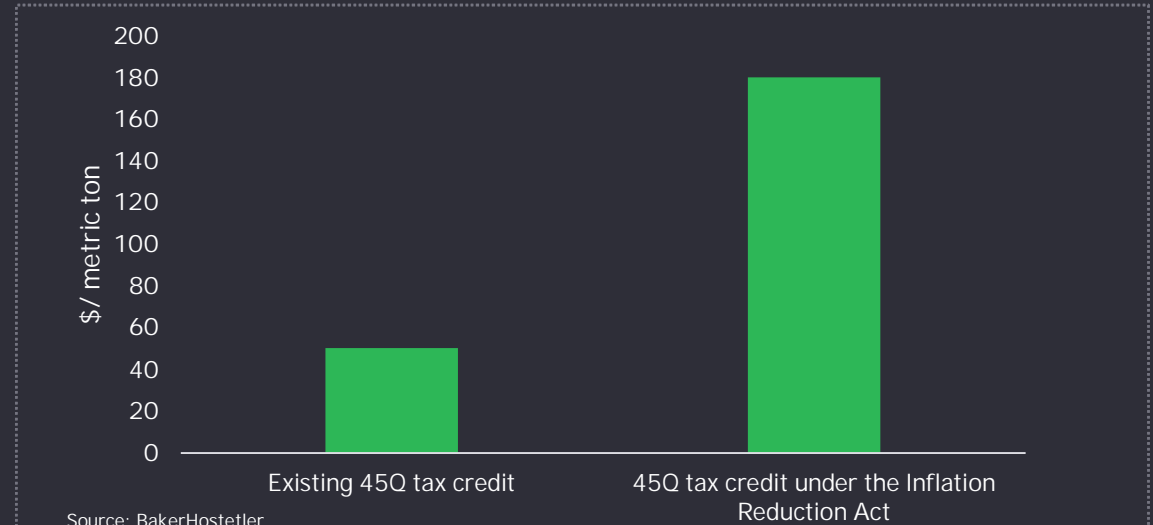
Refinery spreads fall driven by rising inventories



Source: Refinitiv

- In the thirty years prior to 2022, refining spreads touched US\$30/bbl infrequently and briefly and the economics of oil refining were under constant pressure. Siting refineries became increasingly problematic and the possibility of falling product demand from transportation electrification makes investment in new capacity difficult to rationalize.
- The war in Ukraine changed everything. The flow of crude oil feedstocks, blendstocks and finished products had been engineered for a market landscape that was abruptly changed, perhaps permanently. In June, crack spreads reached, US\$57/bbl, lifting profits and incentivizing refiners to defer maintenance and increase throughput.
- As always, markets have adjusted. In September, refinery utilization was running at 92%, higher than in 9 of the 10 years between 2010 and 2019. Gasoline stocks, which were 30 million barrels below 2019 levels in June were within 7 million barrels of 2019 levels in September. Distillate stocks were on the rise at a time of year when they usually fall. Spreads were US\$35/bbl as the quarter ended.

Inflation Reduction Act changes the game for CCUS

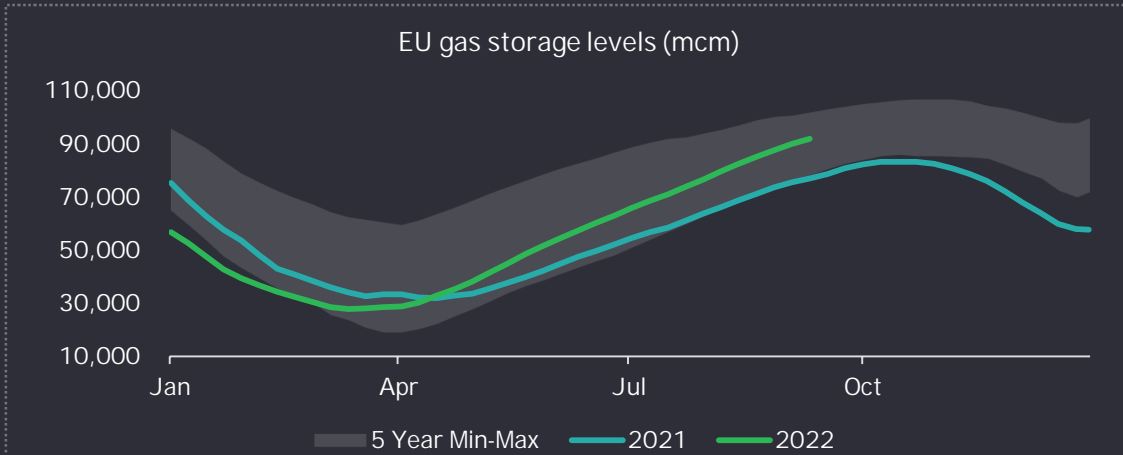


Source: BakerHostetler

- Oil and gas companies are challenged when it comes to energy decarbonization. For companies to become carbon-neutral on a Scope 3 basis, they must scale down their legacy petroleum production, refining and marketing businesses or find a way to economically offset emissions.
- Carbon capture, utilization and sequestration has been studied as a logical, but so far cost-prohibitive way to create those offsets and oil and gas companies have been on the leading edge of research to improve the technology.
- In August, the Inflation Reduction Act, a bill that allocated more than US\$300 billion toward energy transition and climate change initiatives became law. It provides large increases in tax credits available to direct air capture developers and changes the rules governing eligibility. Facilities are eligible for up to US\$130/metric ton for captured carbon used in enhanced oil recover or utilized in certain industrial applications and US\$180/metric ton for other geologically sequestered carbon.

Market fundamentals

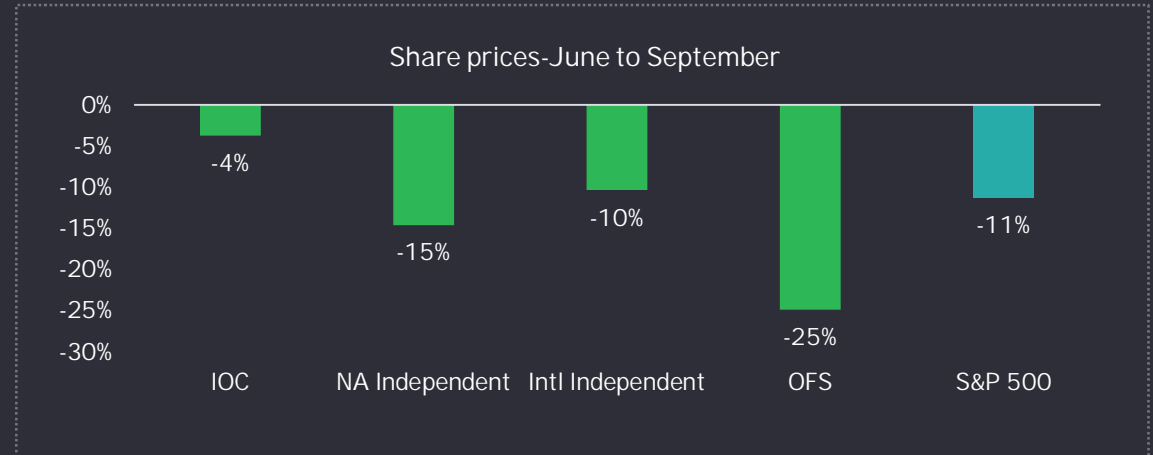
Europe braces for the winter



Source: Bruegel

- European gas and LNG markets remain at levels no one had contemplated before the end of last year but the upward pressure has eased. TTF prices reached almost \$100/MMBtu in August and have fallen about 40%. Some stability has come as companies have firmed up supply plans and conservation measures have been implemented.
- The potential impact of gas shortages in Europe are broad in scope. EU and UK governments are under increasing pressure to provide support to consumers and the fiscal impact of those measures will create additional layers of complexity to central bank efforts to control inflation. Meanwhile, energy costs and physical supply shortfalls are bound to impact European industries' ability to maintain production and employment, making policymakers' problems that much more difficult.
- Storage sites are about 84% full, well ahead of last year's levels and this year's targets. That being said, there is no amount of storage that can fully compensate for the loss of Russian supplies and eliminate the risk of industrial disruption and economic (and physical) hardship.

IOCs provide equity market haven



Source: Capital IQ

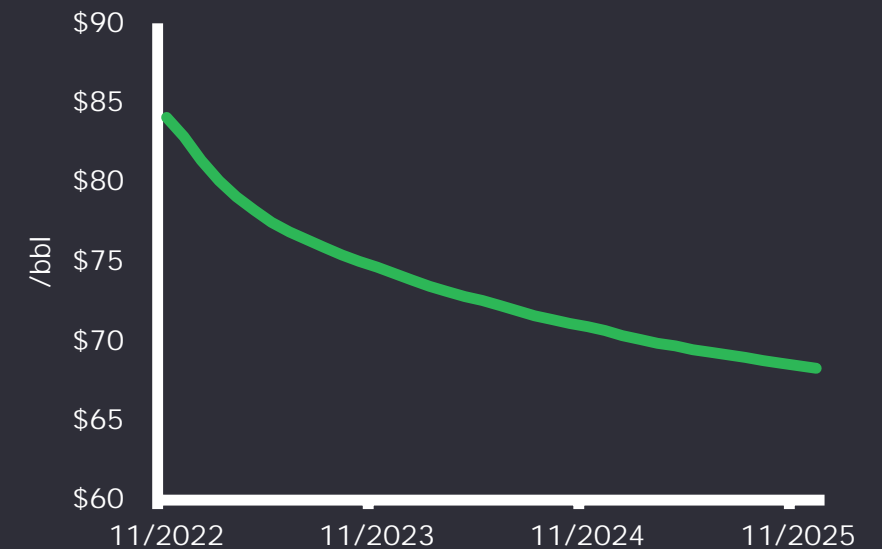
- Financial markets have been in turmoil as monetary policy has tightened and interest rates have crept upward. Investors have become increasingly concerned about recession risks and broad equity prices have fallen in waves as conviction grows that the Federal Reserve will not back away from long-standing inflation targets that had been shelved in favor of policies designed to support government spending on pandemic relief programs.
- Oil stocks haven't been immune. Independent producers have tracked the market as a whole, reflecting the fall in crude oil prices, while oilfield service company shares have been particularly hard hit, losing a quarter of their value. While profitability is improving, energy transition is still on the horizon and their dependence on service-intensive resources is a factor,
- IOCs, in contrast, have performed exceptionally well. Collectively, their operating profits are four times what they were a year ago, long-standing underinvestment indicates structural tightness in upstream markets for the time being and IOCs are well positioned to lead the way in energy decarbonization.



Brent crude



Crude oil prices fell across the board in Q3. Doubts about the global economy and oil demand offset questions about OPEC and Russian production. Near-term supply risks have inverted the forward curve.



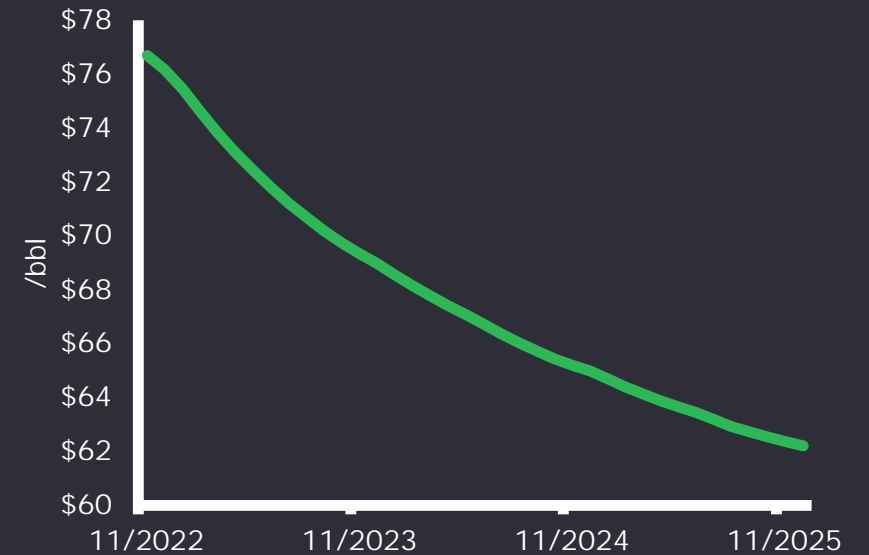
Source: Refinitiv



WTI crude



WTI discount to Brent peaked at over US\$140/bbl (above the long-term spread of \$6/bbl) in August before ending the quarter at just over US\$3/bbl as trade flows continue to adjust to loss of Russian supplies



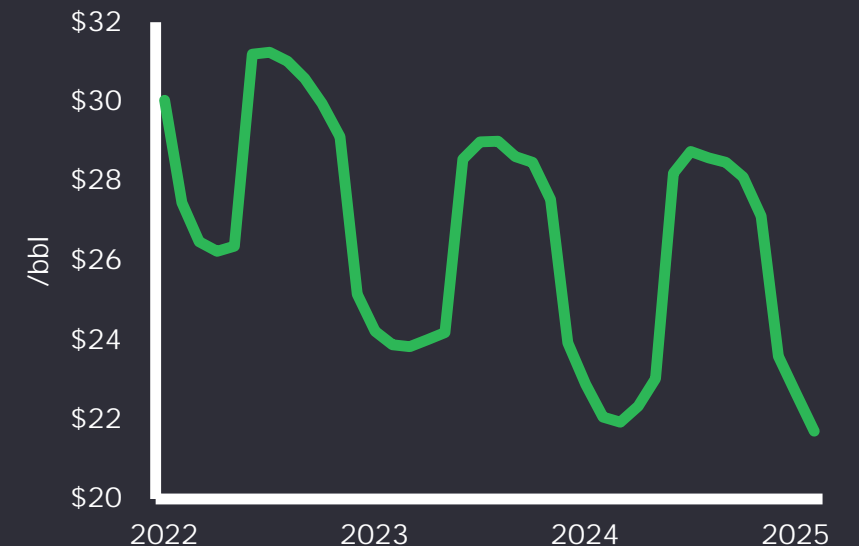
Source: Refinitiv



3:2:1 crack spreads

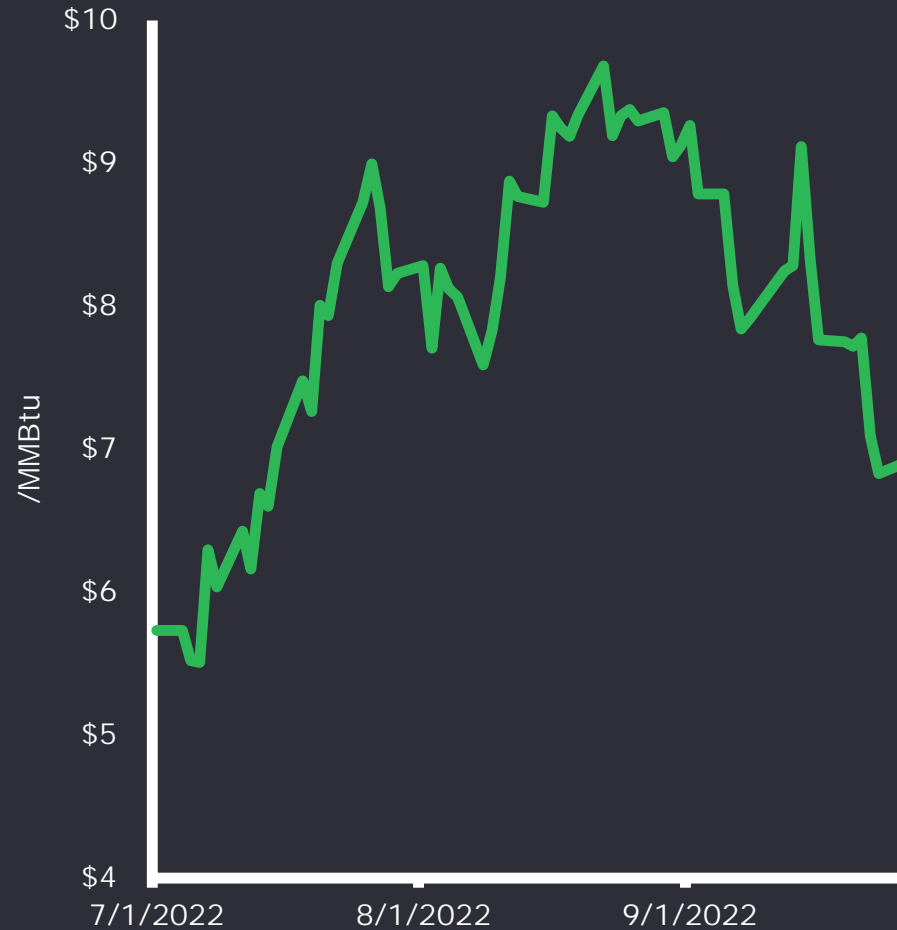


Refining margins fell from record levels throughout the quarter. Higher than normal refinery utilization and some softness in demand have brought inventories to more normal levels

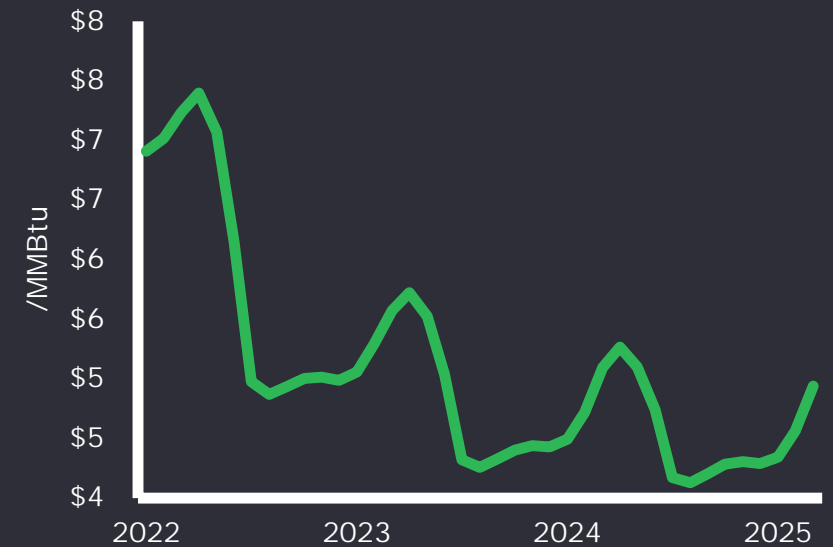


Source: Refinitiv

Henry Hub natural gas



US gas prices continue to follow variation on power sector demand as the weather changes. The forward curve indicates near-term market tightness

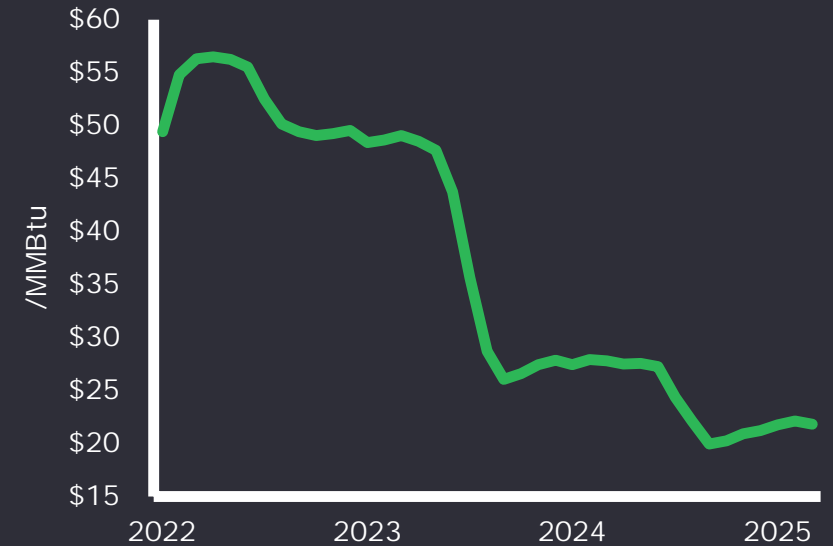


Source: Refinitiv

TTF natural gas



European gas prices peaked at over US\$100/MMBtu in reaction to Nordstream 1 supply interruption. Conservation has trimmed demand and storage levels are above plan. The forward curve indicates a fairly rapid return to “normal”



Source: Refinitiv

Key contacts

Important notice

Price outlook data included in this publication is effective as of 26 September 2022. Given the rapidly evolving nature of the market and the views of market participants, an analysis can quickly become outdated. It should be noted that the EY analysis is not for the purpose of providing an independent view of the outlook for oil and gas prices. Instead, we are collating the views of market participants.

Price outlook data should not be applied mechanistically. Instead, careful consideration should be given to the purpose of any value assessment, with price forecasts assessed in the context of other key assumptions, such as resources and reserves classifications, production rates, discount rates and cost escalation rates, together with an appreciation of the key sensitivities in any such analysis.



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