Energy Intelligence

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CONTENTS

Permian Output Growth Faces Challenges

Oil production growth in the Permian Basin is expected to be weaker this year than previously thought as operators continue to deal with inflation, supply chain snags and investor pressure to keep spending subdued.

A number of Permian producers, including heavyweights such as Exxon Mobil, Chevron and Occidental Petroleum, have revised their 2022 output guidance in the play lower than previously forecast. Other operators such as pure-play Diamondback Energy have boosted their output guidance after a strong performance in the third quarter, but plan to keep activity flat heading into 2023.

Those reports suggest that Permian production growth will continue to slow next year, which could keep overall US output lower than current forecasts suggest and further complicate the global supply picture.

"At a macro level, it's looking safer to take the 'under' on 2023 lower 48 production expectations" due to slower growth in the Permian, analysts at Piper Sandler said in a note last week.

More recently, analytics provider Enverus downgraded its forecast for 2022 oil output growth in the lower 48 states from 560,000 barrels per day to 450,000 b/d, driven by "the headwinds created by oil-field services limitations, the risk of recession and reduced performance from wells drilled recently in the Permian Basin," the firm said.

Passive Players

Inflation, labor shortages and a lack of available equipment have significantly impacted the US oil patch this year, and that trend is expected to continue into 2023, with many Permian operators forecasting a 10%-20% increase in prices for equipment and supplies in the new year.

Larger companies such as Chevron and Exxon do not operate all of their wells in the Permian, so some production is tied to the ability of smaller players that are not as well funded or equipped to manage those challenges.

Changes in non-operated activity could therefore impact how much full equity production ultimately shakes out. Oxy's management said its third-quarter production came it at the lower end of its guidance due to higher downtime and lower output from non-operated assets.

ConocoPhillips raised its capital budget for 2022, driven by inflation and higher non-operated activity. CEO Ryan Lance said during the company's third-quarter earnings call that it was too early to predict its capital budget for 2023 but that it would not look to expand its lower 48 business in the current inflationary environment.

"We'll assess what we think inflation looks like for next year," he said. "And importantly, we'll assess what our partners are doing in terms of the scope that they're trying to execute that we have to fund our share of."

Running Out of Steam

Some Permian operators are also confronting another challenge: the exhaustion of the basin's resources as it matures. Pioneer Natural Resources CEO Scott Sheffield said during his company's third-quarter earnings call that resource exhaustion could become a significant barrier to growth. The company has since shifted its strategy to target high-performing well locations in the Permian following disappointing performance in the July-September period.

Diamondback CEO Travis Stice concurred during his company's quarterly earnings presentation.

“I think there is asset maturation,” Stice said. “I think ... supply chain constraints are also limiting growth. I think for public companies, the continued discipline that we've all been demonstrating on shareholder returns versus a commitment to growth, I think all of those factors weigh into more of a muted production growth from US shale going forward.”

He added that Permian production continues to hover at around 5.5 million barrels per day, but further growth going forward would remain a challenge.

Others such as ConocoPhillips see resource exhaustion as a long-term issue.

“It's a matter of how far in time do you want to go when you look across the play,” ConocoPhillips Chief Economist Helen Currie told Energy Intelligence last week. “I think that when you start focusing on specific companies, based on our analysis of the publicly available data on their acreage, they may start to run out of running room in the next couple of years.”

Others are more optimistic. Ademiju Allen, senior client analyst at Rystad Energy, said at a conference in Houston last week that technology would evolve to boost flagging reserves.

“Tier 2 [assets] can become Tier 1 if you invest in the right technology for the extraction process,” he said. “So as capital allocators continue to optimize their spend going forward, that will also help them to devote spend to [research and development], which will help in reserve replacement.”

Energy Intelligence Director of Oil Markets Research Abhi Rajendran, however, told event attendees that the technology story “is over.”

“It's just getting harder and harder to grow because you're already in such large numbers for oil production and gas production,” he said.

Caroline Evans, Houston

Republican Lawmakers Take Aim at IRA Provisions

With a slim Republican majority looking all but certain in the US House of Representatives following the midterm elections, energy and tax lobbyists are anticipating more scrutiny of the massive infusion of clean energy spending passed earlier this year in the Inflation Reduction Act (IRA).

Based on known election results, Democrats stand to maintain control of the Senate with at least a 50-seat majority — a runoff election in Georgia could push that to 51 — while Republicans look likely to take a narrow majority in the House of Representatives.

A divided Congress means that while Republican lawmakers may target clean energy provisions in the IRA, significant legislative changes are not anticipated, energy lobbyists and analysts suggested during a post-election webinar hosted by Houston-based law firm Norton Rose Fulbright on Tuesday.

The Biden administration counts the IRA and its predecessors, the bipartisan Infrastructure Investment and Jobs Act and a separate law to bolster domestic manufacturing of semiconductor chips, among its chief successes for injecting billions into the clean energy economy.

The tax credits for various clean energy technology, including hydrogen, clean fuels and carbon capture, are seen as more politically difficult for Republicans to target because they involve projects that could spur economic growth.

For example, US Energy Secretary Jennifer Granholm recently said that since the passage of the IRA law in August, which housed significant clean energy manufacturing credits, the US Department of Energy has seen roughly “$30 billion of clean energy manufacturing announcements.”

Instead, Republicans may focus their attention “on the IRA’s alternate minimum corporate tax rate of 15%.

Joe Mikrut, a partner at Capitol Tax Partners, said that one area to watch will be how Republican lawmakers focus their oversight over federal agencies’ implementation of the IRA law and its billions of dollars in new and enhanced clean energy tax credits. That oversight will be “largely focused on the [Internal Revenue Service]” and the roughly $80 billion in additional funding to orchestrate the tax credits, he added.

The IRA spending is likely "a lot of what we'll hear about over the next couple of years," said John Gimigliano, principal-in-charge at risk consultancy KPMG.

When Republicans gain control of the gavel in the House of Representatives, they will wield oversight authority that they can use to delay, if not thwart, the rollout of guidance and rules for projects to take advantage of the IRA provisions.

Tying up regulators and agency staff in hearings and investigations could take time away from developing regulations, noted Michael Catanzaro, a former Trump energy adviser that is now with advocacy CGCN Group.

Bridget DiCosmo, Washington, and Rafiq Latta, Sharm el-Sheikh, Egypt

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US Weighs Oil Product Inventory Requirements

The US is considering requiring oil companies to store more fuel domestically, with diminishing diesel stockpiles in the US Northeast leading to concerns about availability of heating oil heading into the winter.

US Energy Secretary Jennifer Granholm said in an interview with Bloomberg published Tuesday that Washington wants to "make sure there's enough fuel in the United States."

US officials have been warning refiners for months that they need to increase their domestic inventories. That's led to widespread concern that the administration could cut off product exports entirely — a power that it retains.

The fallout of Russia's invasion of Ukraine and the closure of refineries are contributing to a diesel supply crunch. Impending increases to Chinese exports and the end of refinery strikes in France could help ease that pressure, but US officials remain concerned about the impacts the tight global diesel market could have on consumers at home with so little in domestic storage.

Requiring companies to build inventories would, of course, impact the amount of product they have for export. But increasing supplies over time might have a more muted impact on prices than a product export ban would have. Granholm said in the interview that an existing bill that would expand the government's Northeast Home Heating Oil reserve could provide a legislative vehicle for requiring fuel inventories.

Industry has been vocally opposed to export restrictions, with a public tit-for-tat escalating through the summer and into the fall. The heads of the American Petroleum Institute and the American Fuel and Petrochemical Manufacturers lobby groups have urged the Biden administration to rule out any export restrictions. In September, Granholm downplayed the idea of export restrictions, but administration officials have repeatedly declined to rule out the idea entirely.

Granholm has in turn chided oil companies for refusing to increase their product inventories. Following a letter from Exxon CEO Darren Woods in September reported by the *Wall Street Journal* that urged the DOE not to restrict exports, the energy secretary said Woods "misreads the moment."

"Energy companies are making record profits, with refiners and retailers also posting margins that are well above average — while passing the costs onto consumers," she said at the time. "This is a time for American energy companies to take action to lower prices for consumers and to rebuild inventories of gasoline and diesel in this country that are below the five-year range."

Emily Meredith, Washington

EPA to Assist Pemex on Methane Releases

The US Environmental Protection Agency (EPA) will work with Pemex to address the Mexican state-backed oil company's notorious methane emissions.

Decades-old infrastructure at Pemex has routinely placed the country among the worst when it comes to emissions. Earlier this year, the European Space Agency published a report showing a massive release of methane emissions from the Ku-Maloob-Zaap offshore oil field, which it said amounted to a "17-day ultra-emission event."

The EPA will offer technical support to Pemex aimed at identifying major infrastructure and equipment sources of methane leaks and recommend mitigation measures. Those could include reducing flaring or ways to capture flaring; equipment replacement; regular leak detection and repair; and operational changes to end routine venting.

Pemex flared 12.1% of its natural gas production in 2021, according to filings with the US Securities and Exchange Commission, largely due to an outage of gas compression capacity at Ku-Maloob-Zaap.

But cleaning up methane emissions takes money — a problem that has plagued Pemex more broadly, even in the current elevated commodity price environment.

The US-Mexico announcement is part of a broader push, helmed by the US and Europe, at the COP27 negotiations in Egypt. More than 130 countries have now signed up to the Global Methane Pledge, which debuted at COP26 in Glasgow last year. A handful of countries, including Canada and the US, debuted new policies aimed at the pledge threshold of reducing methane emissions by 30% by 2030, with a particular focus on reducing methane emissions from the oil and natural gas sector.

Kayrros, a data analytics firm that tracks emissions via satellite, says that reductions haven't been significant enough in the year since the Global Methane Pledge was first made to put the reduction target in reach.

Emily Meredith, Washington

Mechanics of the G7 Price Cap on Russian Oil

The UK government published guidelines this week on the proposed price cap for Russia oil exports, amid expectations that an agreement could be hammered out at the G20 summit now under way in Bali, Indonesia.

There will be separate price caps for crude (from Dec. 5) and refined products (Feb. 5) that will complement an EU embargo on Russian oil imports coming into force on those dates.

But, with Russia refusing to endorse the price cap and its two main customers, India and China, showing no enthusiasm for the concept, the impact on Russian oil export levels and prices remains unclear.

The price cap targets Russia's exports outside the EU and broader G7, and is intended to allow Russian oil to keep flowing despite the ban on shipping and related financial services while limiting revenues to Moscow.

Waivers to a ban on shipping services will be granted if a cargo is purchased at or below the G7 price cap.

Energy Intelligence outlines below some of the details on implementation of the price cap that have emerged this week.

Why is the UK move significant?

Across G7 states, including the EU, there will be regulations restricting services for the maritime transportation of Russian oil, including trading, shipping, finance and insurance, which will form the foundation for the oil price cap. Compliance with the price cap will then allow an exception to the ban.

What that means in practice is if a firm buys Russian oil at or below the agreed price cap, it will be exempt from the services ban and thus able to access those G7 services to transport the oil.

London this week released detailed, public information on the practicalities, following an earlier move by the US. Further details have been awaited by the oil industry as the deadline rapidly approaches.

The UK is a crucial part of the initiative because of the big role it plays in international maritime insurance. It provides some 60% of protection and indemnity coverage for the global shipping industry, according to the UK Treasury.

The UK guidelines basically say that oil traders are responsible for reporting the actual price of the transaction and liable for sanctions penalties of up to £1 million ($1.2 million), or 50% of the estimated value of the breach, if they cheat. But officials will be talking to industry over the next couple weeks to finetune punishment. Banks, insurance and shipping companies will not be held responsible if they are found to have acted on wrong information, but must report wrongdoing it they suspect it.

Will the UK be the only G7 nation to impose financial penalties?

No, all G7 nations and allies in the scheme, which so far includes Australia, are expected to enforce this price cap mechanism on Russian crude oil and oil products — although Japan may only be a passive participant. The UK will do so via the UK Treasury's Office of Financial Sanctions Implementation, the US via the US Treasury's Office of Foreign Assets Control and the EU via the European Commission and its member states.

How much has the oil industry been consulted?

In drawing up the latest guidelines, the UK and US governments say they worked closely with oil companies, trading houses, shipping firms, brokerages and insurance companies to ensure the effective implementation of the measures. The "attestation process" is said to be very different from when the process first started.

However, officials accept that there was industry caution over the oil price cap, that it is novel and quite different from previous sanctions measures. Ultimately, traders and companies along the oil trading value chain will have to decide for themselves whether they have the risk appetite to lift Russian Urals going forward.

Some international oil companies have been vocal in their opposition to this type of market intervention. TotalEnergies CEO Patrick Pouyanne told the Energy Intelligence Forum in October that he considered the price cap "a bad idea."

Can a company trade oil using a fluctuating benchmark like Brent and still comply with UK Treasury guidelines?

The UK Treasury guidelines state that the cap will apply as a fixed price at the time of the "most recent transaction" between loading a cargo and delivering it.

In practice, most oil companies do not trade oil at a fixed price, but rather as a differential to a variable benchmark. They arrange shipping and insurance well before the dates of loading or delivering of a cargo, when the actual price is determined.

For example, if the price cap were set at $60 per barrel and a trader were to purchase a Russian Urals grade cargo at a $20 discount to Brent, which at that time was trading at around $80, then the trader would be in compliance. However, if Brent then rises to $100 around the date of loading the cargo, the trader would no longer be compliant.

The rules do not seem to accommodate this. In keeping with the G7 agreement, the UK government insists that the price cap will be a fixed price set along the supply chain from leaving Russia to the point of delivery. If the cap is set at $40/bbl, it will be applied at $40/bbl at any stage along that chain.

If a Russian Urals crude shipment is taken inland and not substantially transformed, and a trader reships it as a seaborne cargo, the cap would continue to be imposed. If it is substantially transformed into refined products, the cap will not apply.

How will Russia react?

Predicting the reaction of the Russian government to this new set of G7 measures is very hard.

Some speculate that Moscow could limit some production in an attempt to drive up prices and hurt the G7, as oil consumers.

The UK and US governments appear to be betting that ultimately Moscow will not want to cut off a key revenue stream for its economy.

Moscow has said it will not cooperate with the price cap. However, London expects Russia to seek to continue to sell oil into the cap or within the confines of the cap mechanism. The UK government thinks it will not risk damaging its reputation as a reliable supplier to customers.

The G7 plans to monitor the mechanism constantly. If Moscow takes a more unpredictable approach, G7 governments would review the oil price cap and try to respond quickly to any Russian move, according to the plans.

Tom Pepper and Paul Sampson, London, and John van Schaik, New York

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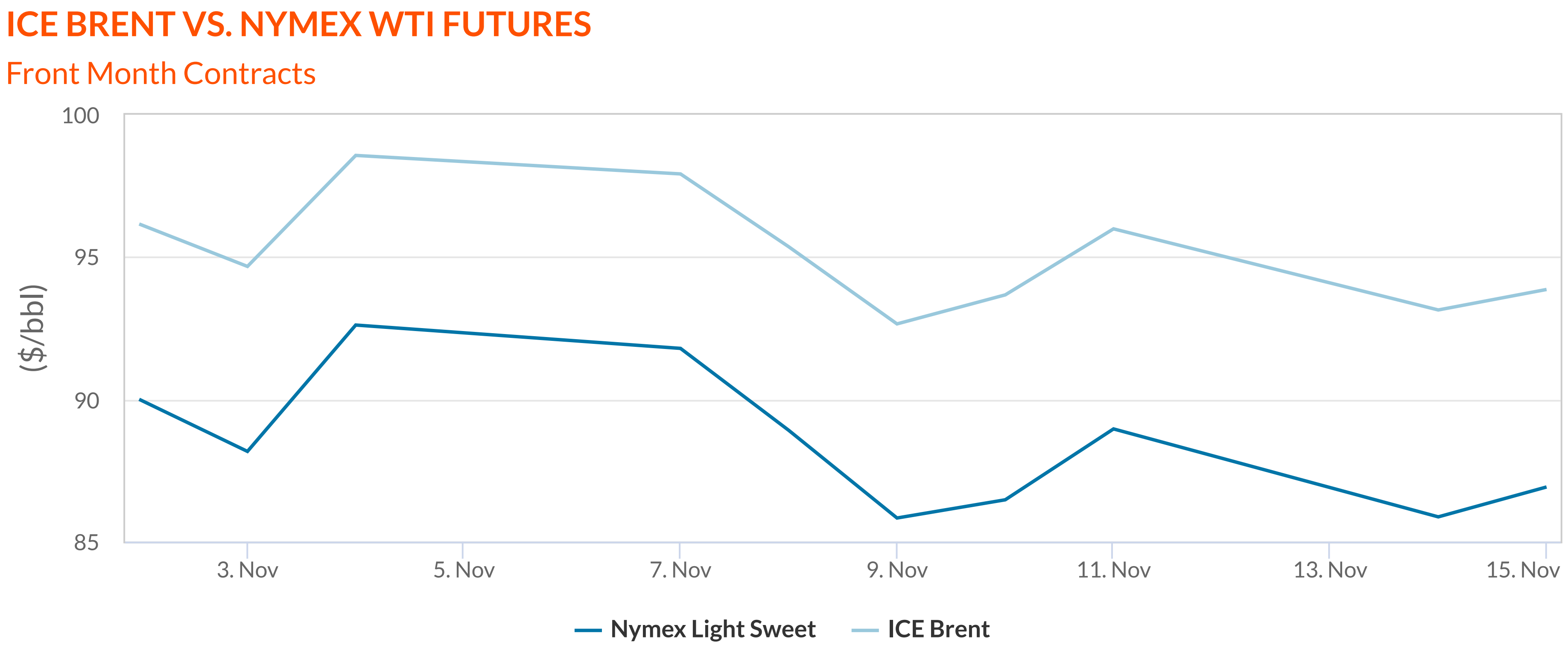
Druzhba Outage Sends Crude Futures Higher

Oil prices settled higher on Tuesday following news that oil supply to Hungary via the Druzhba oil pipeline had been temporarily suspended due to a fall in pressure.

Brent crude futures closed up 72¢ at $93.86 per barrel, while US West Texas Intermediate (WTI) crude rose by $1.05 to settle at $86.92/bbl.

Russian state-owned pipeline monopoly Transneft was notified by Ukraine of the pipeline disruption, the RIA news agency quoted Transneft as saying on Tuesday.



Meanwhile, the US said it was investigating unconfirmed reports that stray Russian missiles caused an explosion that killed two people in a Polish village near the border with Ukraine.

An EU ban on seaborne Russian crude, set to start on Dec. 5, means that 1.1 million barrels per day of oil supply will need to be replaced, the International Energy Agency (IEA) said Tuesday.

"When you look at what we saw from the IEA about global oil inventories, that should be very bullish," said Phil Flynn, an analyst at Price Futures Group.

Adding support to oil prices, US producer prices increased less than expected in October, providing more evidence that inflation was starting to ease, which could allow the US Federal Reserve to slow its aggressive interest rate hikes.

Wall Street indexes rose after the data was published, while the US dollar index fell, making greenback-denominated oil less expensive for other currency holders.

"The inflation data was positive in a way. Stocks took off from that and it looks like we're getting dragged higher now," said John Kilduff, partner at Again Capital in New York. "We're still in that inverse dollar effect here."

The IEA's gloomy economic outlook will put global oil demand on track to contract by nearly 250,000 b/d in the fourth quarter of 2022 from a year earlier, with demand growth slowing to 1.6 million b/d in 2023 from 2.1 million b/d in full-year 2022.

US crude stocks fell by about 5.8 million barrels for the week ended Nov. 11, according to market sources citing American Petroleum Institute figures on Tuesday. Gasoline inventories rose by about 1.7 million bbl while distillate stocks rose by about 850,000 bbl. US government data on domestic inventories will be published on Wednesday.

In China, Covid-19 cases continued to rise, including in the capital Beijing, and the country's factory output growth slowed. Investment bank JPMorgan cut its quarterly and full-year forecasts for economic growth in China. Opec recently cut its 2022 global oil demand growth forecast for the fifth time since April, citing mounting economic challenges including high inflation and rising interest rates. (Reuters)

IN BRIEF

Trinidad Bid Decisions Coming Soon

Trinidad and Tobago's cabinet will soon make a decision on bids submitted for four deepwater exploration blocks that are key to expanding the country's natural gas production, Energy Minister Stuart Young said.

The Caribbean country earlier this year offered 17 blocks off the northern and eastern coasts in a competitive auction that attracted only four bids — all from a consortium of its existing operators. New gas supplies are urgently needed to boost the country's LNG production.

“The bids have come in, the evaluation teams have done their work, and the Ministry of Energy is going to the cabinet with a recommendation,” Young told Reuters. "We have slipped a little bit on that time frame, [but] the evaluation is over."

The government originally had hoped to announce winners for the deepwater blocks in September but was delayed. Young, who spoke to Reuters last week, did not say when the cabinet would make its decision.

Young's comments came days after David Campbell, the newly named head of BP's Trinidad and Tobago operation, called for officials to speed up their evaluation.

Campbell told a meeting of energy executives earlier this month that BP need to access deepwater fields for future output. BP is going to add 300 MMcf/d to its existing 1.298 Bcf/d this quarter, Campbell said, but the new production is low-pressure gas that signals the existing basin is declining.

Trinidad is Latin America's largest LNG exporter, with the capacity to process 4.2 Bcf/d into LNG, petrochemicals and power. But its gas production is just under 3 Bcf/d. (Reuters)

Pemex Widens Maya Discount for December

PEMEX CRUDE K-FACTORS

($/bbl)	Maya	Isthmus	Olmeca
US Gulf December	-$16.30	-$9.85	-$8.50
US Gulf November	-$13.40	-$7.00	-$6.70

Source: Pemex

DATA SNAPSHOT

Oil and Gas Prices, Nov. 15, 2022

All data are produced by Energy Intelligence in cooperation with Refinitiv.

CRUDE OIL FUTURES

($/bbl)	Chg.	1st Mth.	2nd Mth.
ICE Brent	+0.72	93.86	92.75
Nymex Light Sweet	+1.05	86.92	86.25
DME Oman	-0.09	88.24	87.46
ICE Murban	+0.18	92.01	90.92

INTERNATIONAL SPOT CRUDES

($/bbl)	Chg.	Price	Prior Close
Brent (Dated)	+0.72	94.30	93.58
Dubai	-4.20	86.80	91.00
Forties	-1.11	94.80	95.91
Bonny Light	-1.32	95.65	96.97
Urals	-1.32	75.27	76.59
Opec Basket*			94.42

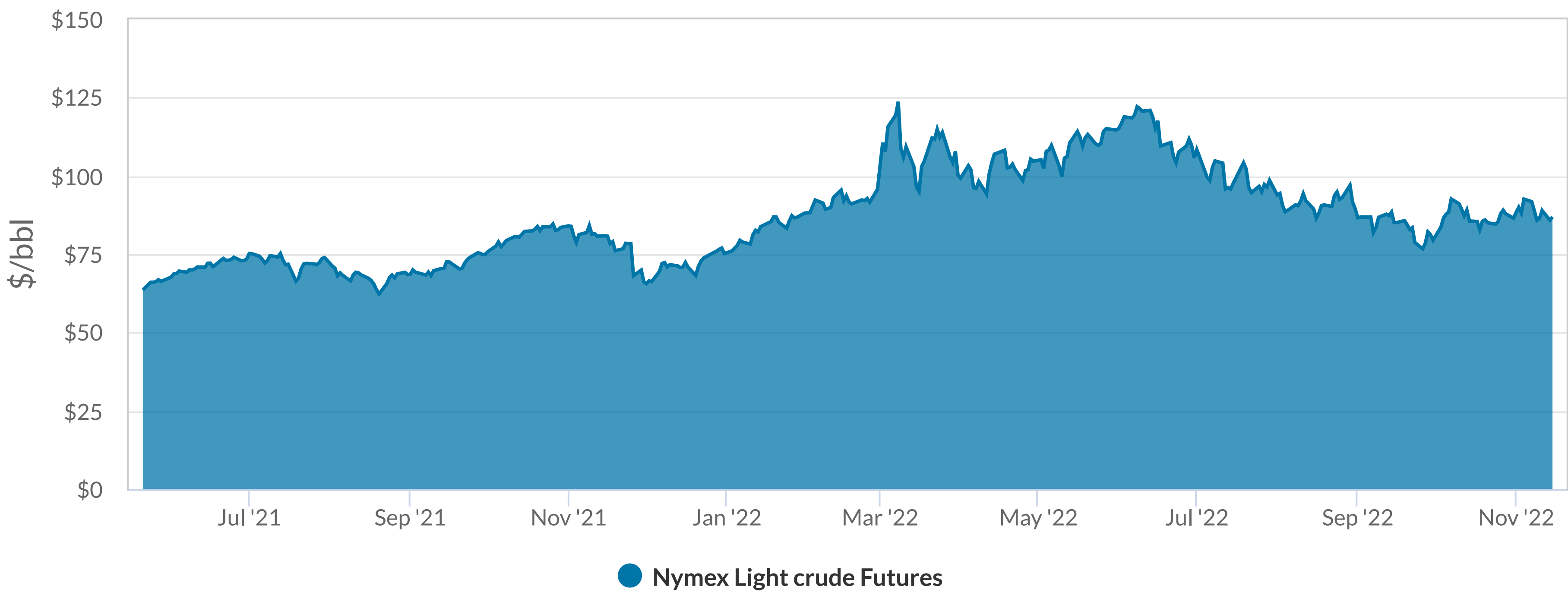
*Opec price assessed.

NORTH AMERICAN SPOT CRUDES

($/bbl)	Chg.	Price	Prior Close
WTI (Cushing)	+1.02	86.87	85.85
WTS (Midland)	+0.97	85.37	84.40
LLS	+1.52	91.37	89.85
Mars	+1.57	84.67	83.10
Bakken	+1.02	91.67	90.65

ICE BRENT CRUDE FUTURES

NYMEX LIGHT CRUDE FUTURES

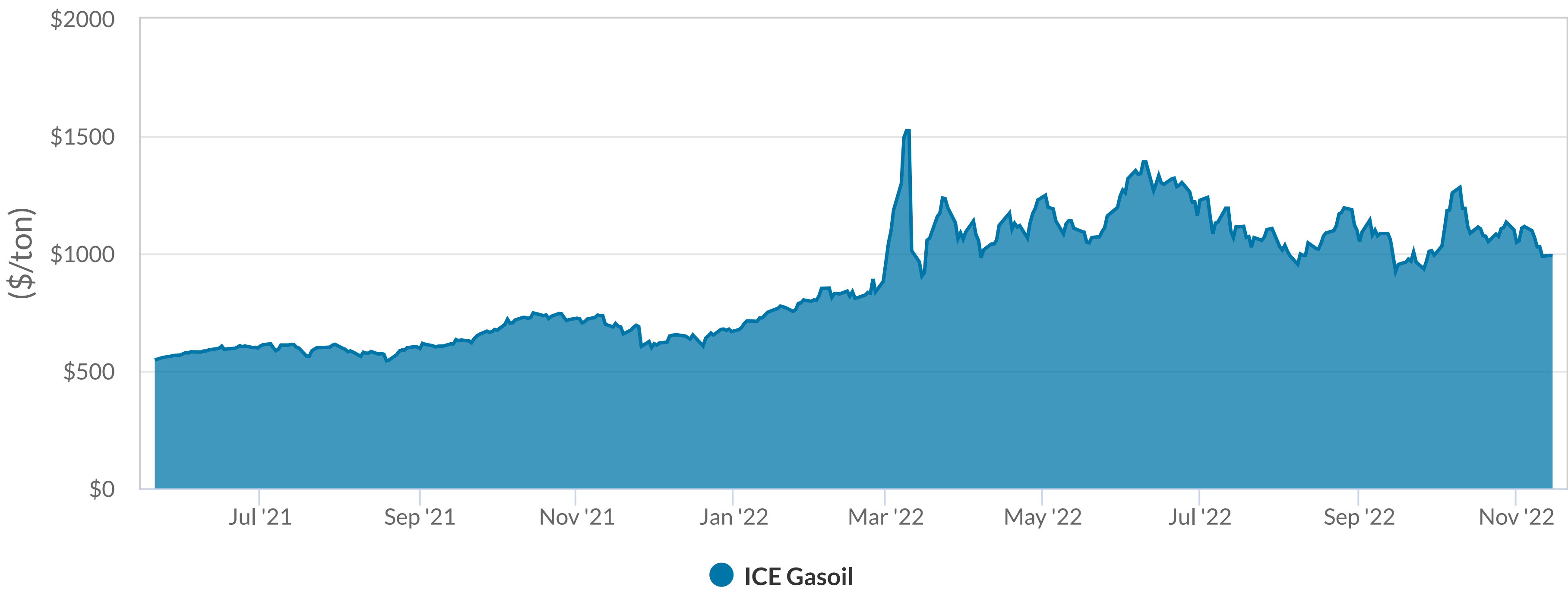


Energy Intelligence

REFINED PRODUCT FUTURES

Nymex	Chg.	1st Mth.	2nd Mth.
Gasoline (¢/gal)	-1.24	251.61	247.42
ULSD Diesel (¢/gal)	+9.73	364.13	350.99
ICE			
Gasoil ($/ton)	-1.50	990.25	981.00
Gasoil (¢/gal)	-0.48	316.05	313.10

ICE GASOIL FUTURES



NYMEX GASOLINE FUTURES

US SPOT REFINED PRODUCTS

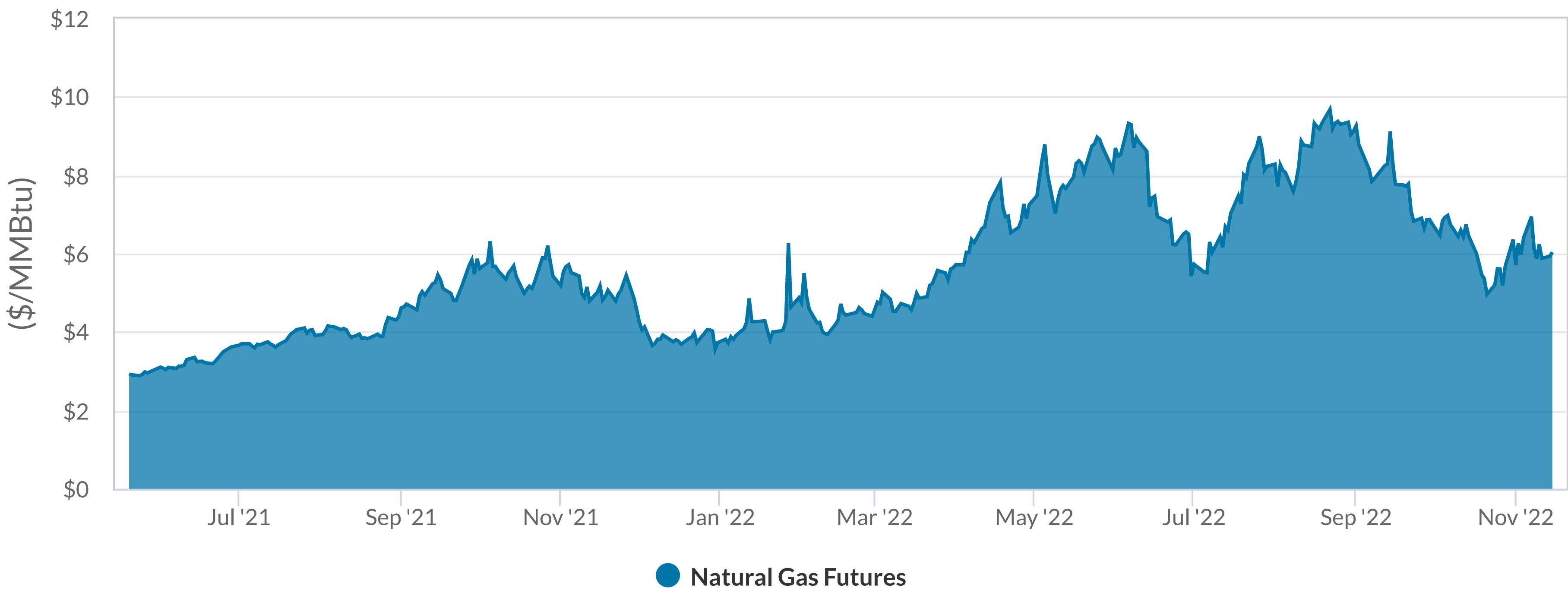
New York (¢/gal)	Chg.	Price	Prior Close
Regular Gasoline	+0.20	293.02	292.82
No.2 Heating Oil	+9.41	433.46	424.05
No.2 ULSD Diesel	+9.41	463.46	454.05
No.6 Oil 0.3% *			93.35
No.6 Oil 1% *			84.99
No.6 Oil 3% *			66.44
Gulf Coast (¢/gal)			
Regular Gasoline			249.57
No.2 ULSD Diesel	+3.41	333.21	329.80
No.6 Oil 0.7% *			83.23
No.6 Oil 1% *			83.23
No.6 Oil 3% *			63.76

*Price in $/bbl. Percentages refer to sulfur content.

INTERNATIONAL SPOT REFINED PRODUCTS

Rotterdam ($/ton)	Chg.	Price	Prior Close
Regular Gasoline	-40.20	843.80	884.00
ULSD Diesel	+21.00	1021.50	1000.50
Singapore ($/bbl)			
Gasoil	-3.19	121.01	124.20
Jet/Kerosene	-4.96	122.64	127.60
VLSFO Fuel Oil ($/ton)	-37.54	633.79	671.33
HSFO Fuel Oil 180 ($/ton)	-6.65	430.44	437.09

NYMEX NATURAL GAS FUTURES



Refinitiv

NATURAL GAS PRICES

($/MMBtu)	Chg.	Price
Henry Hub, Nymex	+0.10	6.03
Henry Hub, Spot	-0.25	5.90
Transco Zone 6 - NY	N/A	N/A
Chicago Citygate	-0.30	5.94
Rockies (Opal)	-0.19	8.33
Southern Calif. Citygate	+0.16	9.00
AECO Hub (Canada)	+0.10	4.46
Dutch TTF (euro/MWh)	+6.00	116.00
UK NBP Spot (p/th)	+6.00	106.00

US/Canada spot prices from Natural Gas Week

Equity Markets, Nov. 15, 2022

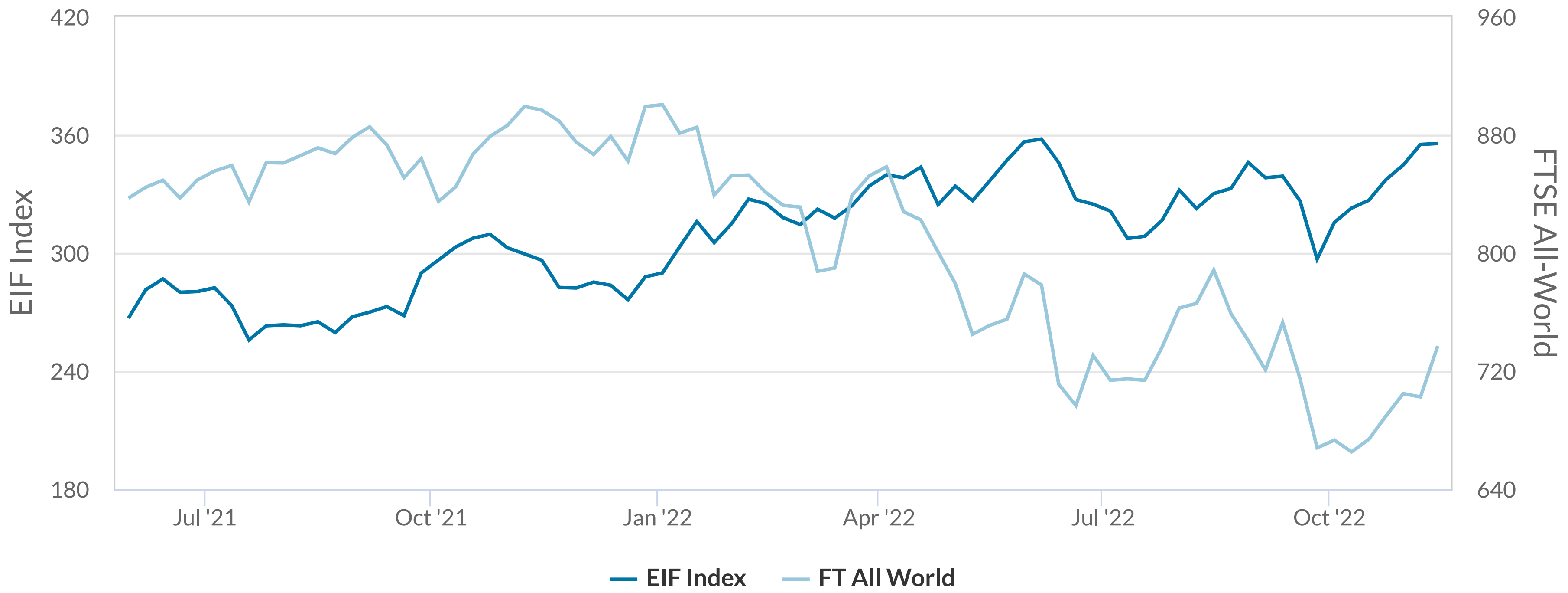
All data are produced by Energy Intelligence in cooperation with Reuters.

EQUITY MARKET INDEXES

	Chg.	Index	YTD %Chg.
EIF Global*	-1.09	355.55	+23.99
S&P 500	+34.48	3,991.73	-16.72
FTSE All-World*	-5.19	736.88	-18.23

*Index for previous day

EIF INDEX



EIF Global Oil and Gas Index of 21 traded equities