

S&P Global

Commodity Insights

North America NGL Market Short-Term Outlook

High inventory provides a cushion for the upcoming winter season

Yelena Yelisseyeva / Commodity Insights / Senior Research Analyst

Mina Richardson / Commodity Insights / Senior Research Analyst

Manmohan Pozhickal / Commodity Insights / Associate Director

Jordan Woloschuk / Commodity Insights / Associate Director

Veeral Mehta / Commodity Insights / Executive Director

Bill Rawlusyk / Commodity Insights / Executive Director

November 2025



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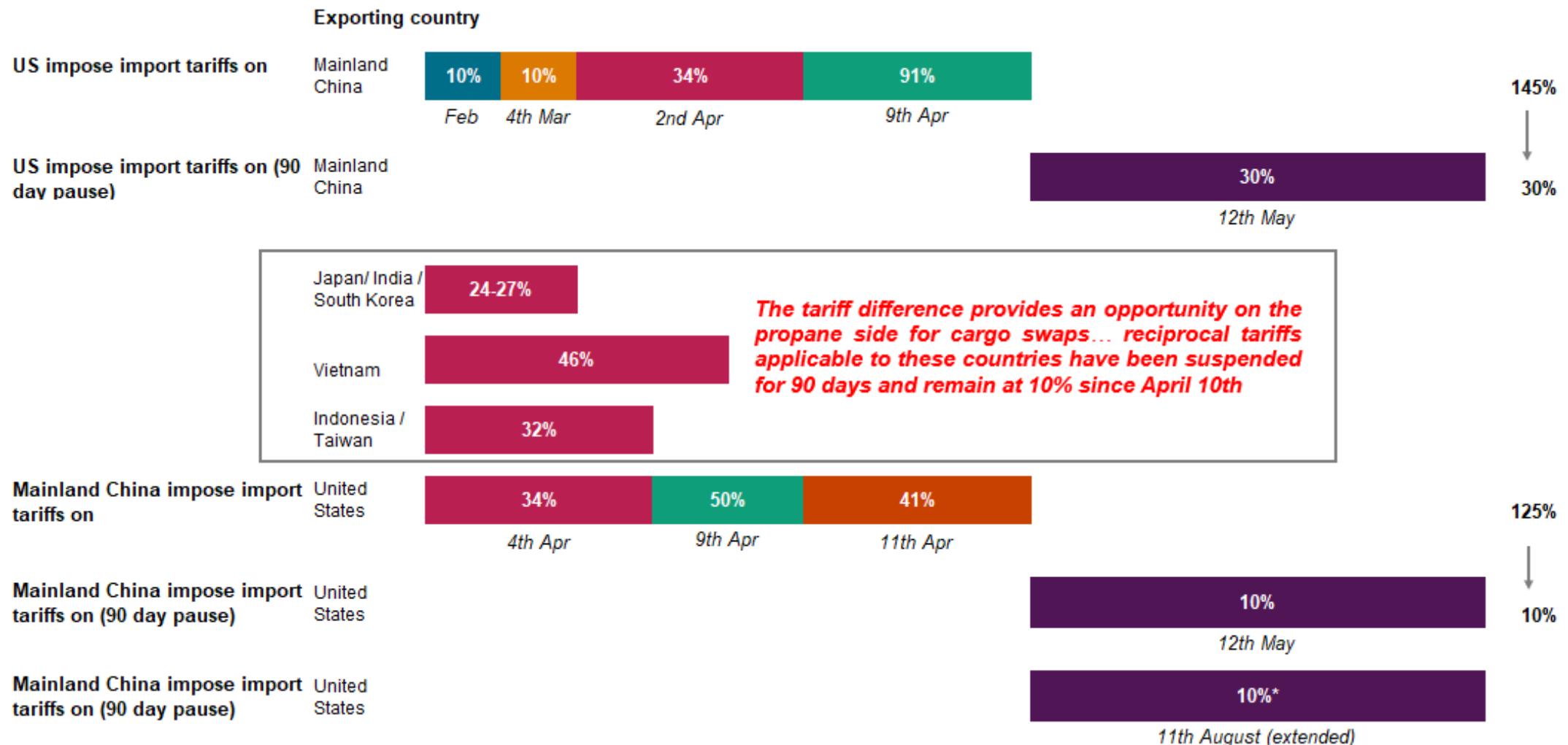
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Key Highlights

Trade and tariff assumptions for November Short Term Outlook

- Global GDP growth for 2025 is projected at 2.7%, which is similar to our previous outlook, while the forecast for 2026 is 2.6%.
- The US-China 90-day pause has been extended. Ethane assumed to be exempted, and the tariff on imports into mainland China assumed to be at 1%, after quietly reducing from 11%. The additional tariffs on LPG imports into mainland China are still 10% through the new 90-day pause.
- A new complexity has arisen from the proposed Section 301 fees under the U.S. Trade Representative (USTR), targeting vessels built or owned by Chinese entities. These fees could increase service costs and marine freight rates, with a \$50-per-net-ton charge for Annex 1 vessels effective October 14, totaling about \$900,000 per U.S. port call. However, the USTR has agreed to pause the broader investigation and related measures for one year, coinciding with China's commitment to suspend its countermeasures.
- USMCA will continue to be enforced and in effect for Mexico, Canada and US trade.
- The ethane export licenses required by the US BIS (Bureau of Industry & Security) as of 29 May were rescinded by 2 July. The demand for ethane in China has fully recovered after the ethane export licensing turmoil, leading to positive outcomes for suppliers and exporters.
- Propane exports are expected to be average 1.93 million b/d in October-November. LPG Cargo swaps have been ongoing to circumvent the import tariff. Cargo swaps expected to continue, but there is optimism with the 90-day pause extension, and some importers will return to the US.

2025 Timeline of US-China tariffs



Data compiled August 2025.

Note: Ethane assumed to be exempted, and the tariff on imports into mainland China assumed to be at 1%. The additional tariffs on LPG import into mainland China are still 10% through the extended 90-day pause.

Source: S&P Global Commodity Insights.

Growth forecasts: Risks aplenty

- Our assessment of growth prospects was broadly unchanged in October's update. In most major economies, annual forecasts for 2026 are similar to the expected outcomes for 2025.
- Various factors are expected to support growth, including:
 - Lower oil prices, contributing to lower consumer price inflation
 - Looser financial conditions, as many central banks extend their rate-cutting cycles as inflation concerns recede
 - Solid labor market conditions, with unemployment rates in most major economies still very low by historical standards
 - Looser fiscal policy in the US and Germany
- However, there are numerous downside risks to monitor:
 - A re-escalation of trade tensions and related uncertainties, with spillovers to global financial markets
 - A rise in risk aversion and/or a loss of confidence in debt sustainability, leading to higher yields and spreads
 - Stubbornly elevated inflation reducing the room for central bank rate cuts, increasing the risk of equity market corrections
- The 2026 growth projections for the US, the eurozone, UK, India and Russia were lowered in October, resulting in a slightly lower global growth forecast. The 2025 estimate was lifted a notch, largely reflecting the evolution of recent data.

Real GDP (% change)

As of	2025		2026	
	Sep 2025	Oct 2025	Sep 2025	Oct 2025
World	2.6	2.7	2.7	2.6
United States	1.9	2.0	2.3	2.2
Canada	1.1	1.1	1.4	1.4
Brazil	2.4	2.2	2.1	2.0
Eurozone	1.3	1.3	1.0	0.9
United Kingdom	1.3	1.4	1.1	1.0
Russia	1.2	1.0	2.0	1.7
Mainland China	4.8	4.8	4.3	4.3
Japan	1.2	1.2	0.6	0.7
India*	6.2	6.3	6.3	6.2

Data compiled Oct. 15, 2025.

* Fiscal year starting April 1, 2023.

Source: S&P Global Market Intelligence.

Key Highlights

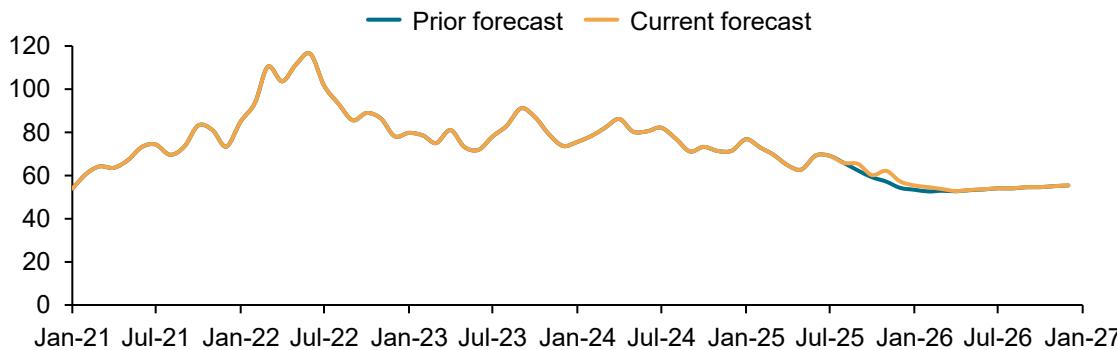
- **Oil price outlook:** The oil market is facing upward price pressures due to fears of US sanctions on Russian oil, leading buyers to consider alternatives from the Middle East or Americas. Many buyers are hesitant to purchase discounted Russian crude due to potential risks of losing access to the US financial system. While new sanctions increase price risks, the base case suggests they won't significantly reduce market oil volumes. Despite these concerns, a crude oil surplus is expected through early 2026, with rising inventories indicated by increased oil on the water. Price forecasts for November and December estimate Dated Brent in the mid-to-upper \$60s and WTI in the low-to-mid \$60s, with risks of higher prices if sanctions remain unchanged. For 2026 and 2027, prices are projected to be \$58/barrel (Dated Brent) and \$55/barrel (WTI) in 2026, rising to \$64 and \$61, respectively, in 2027.
- **Gas price outlook: End-October US Lower 48 inventories look to top out around 3.93 Tcf, 177 Bcf above the lagging five-year average, 21 Bcf higher than October 2024 and the highest for the month since 2016.** Inventories stood at 3.81 Tcf on Oct. 17, and despite the reductions in Northeast and Permian output month over month and record LNG feedgas levels, the seasonal decline in end-use loads and recent modest supply recovery still allow for substantial injections through the end of October. Henry Hub is expected to average \$4.60/MMBtu in 2026 and \$4.52/MMBtu in 2027.
- **NGL supply growth is projected to be influenced by an increase in the gas-to-oil ratio (GOR) from 2025 to 2027.** Recent data reveals that, despite a decline in upstream activity due to lower oil prices, there has been a notable rise in GOR. This suggests that associated gas is playing a larger role in U.S. natural gas production, despite slower oil production growth and the emergence of new wells with higher gas content. Although the overall growth rate of natural gas liquids (NGL) production may decelerate, absolute production levels are still expected to rise. NGL field production increased by 5% in average through 2025 -2027 compared to the last outlook. **The combination of stable domestic demand and increasing NGL supply is likely to result in lower LPG prices.**
- **Ethane prices firm slightly:** With natural gas prices showing only a slight uptick in October compared with September, ethane prices edged higher to 27 cpg, up from 26 cpg in September. The frac spread to Henry Hub widened to 7 cpg, up from 6 cpg the previous month. In the Permian Basin, the frac spread remained elevated at around 34 cpg, supported by very low regional gas prices resulting from tight natural gas takeaway capacity. Ethane prices are projected to average 24 cpg, 33 cpg and 39 cpg in 2025, 2026 and 2027 respectively.
- **Propane prices fell by 6 cents per gallon in October, averaging 63 cpg. On a percentage-of-WTI basis, propane weakened to 44%.** Inventories swelled to more than 103 million barrels—over 10 million barrels above the five-year average and slightly higher than last year—supported by robust production. The Mont Belvieu propane-to-crude ratio may strengthen as winter heating demand sets in. However, with supply underpinned by a high gas-to-oil ratio (GOR), propane is expected to remain weak relative to previous winters. Globally, propane supply remains ample, and prices continue to lag naphtha—the main competing petrochemical feedstock. Saudi CP prices have declined over the past two months, reflecting robust supply, weak global petrochemical demand and the desire to defend market share. Additional uncertainty surrounding USTR implementation and port fees has further dampened demand expectations.
- **In our outlook, the average propane-to-West Texas Intermediate (WTI) price ratio for October 2025 to March 2026 is projected at 48%, slightly below last winter's 50%.** This projection reflects a balance between supply and demand dynamics, as strong supply cushions and GOR-driven production growth limit upside pricing risks, even amid potential cold snaps. The LPG price forecast (2026-27) has been revised materially lower compared to the previous report. The US Propane to WTI ratio has been cut down in 2026 and 2027 to 44% and 42% respectively. The main driver is a significant change in the upstream gas supply outlook. Higher Permian gas production, following an upward revision to the gas-to-oil ratio (GOR), has added incremental supply to the market. As a result, prices have adjusted downward to stimulate additional demand.
- **In October, Mont Belvieu normal butane prices slid to 83 cpg, a notable drop from 90 cpg in September.** This decline was driven not only by weaker crude prices but was amplified by a significant reduction in Saudi Arabia's LPG contract price (CP)—now at its lowest level since August 2023. The CP cut reflects increasing bearishness in the global LPG market and has intensified competitive pressure from international suppliers. Mont Belvieu prices responded swiftly; butane values fell from 93 cpg at the end of September to 84.5 cpg in early October. Concurrently, the butane-to-crude ratio eased to 57% in October, down from 59% the previous month. Even with seasonal support from winter gasoline blending demand, the upside for US butane remains constrained as export logistics and freight costs continue to reshape trade economics.

Key Highlights (continued)

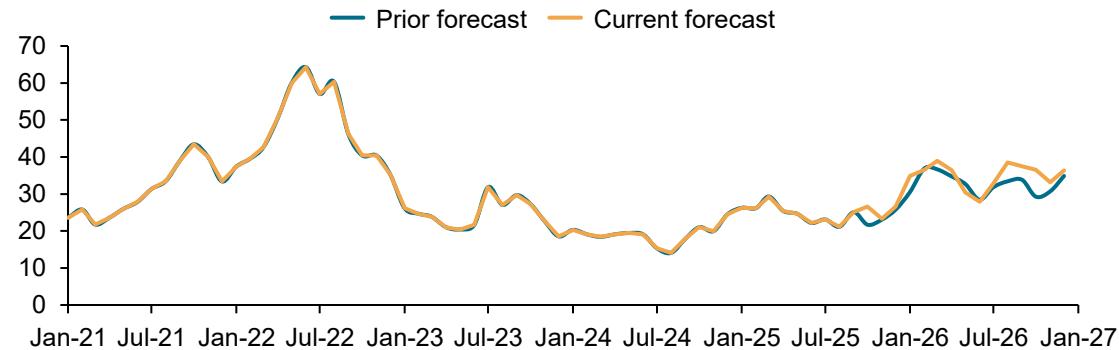
- **Mont Belvieu isobutane prices dropped by 7 cpg in October, largely tracking declines in alkylate and reformate values, which are its primary end uses.** USGC octane values decreased from 3.49 c/oct-gal to 3.31 c/oct-gal over the month. Isobutane typically moves in tandem with octane values, which can experience temporary spikes and drops during seasonal gasoline transitions. This time, the octane values are expected to decline as the winter season begins, driven by increased butane blending that reduces the need for octane enhancers.
- **September natural gasoline prices averaged 131 cpg and October the prices averaged 123 cpg.** Natural gasoline remained stable with WTI ratio at 86% as price declined along with crude price. Seasonal switch to winter-grade gasoline will likely lower demand for naphtha as a direct blending component. The overall Asian naphtha complex remains constrained as well by weak downstream petrochemical demand, ample supply and thin olefin production margins.
- **Both US-Asia and US-Europe propane arbitrage economics remained tight in October, as global prices—especially Asia propane—fell in step with Saudi Arabia's CP cut. To enhance the arbitrage, Houston-to-Chiba freight rates dropped from an average of \$149/mt to \$124/mt, and the propane spot waterborne premium decreased from 4.8 cpg to 3.5 cpg.** This easing in logistics costs reflects persistently tight arbitrage conditions arising from weaker Asian propane prices. Despite the decline in freight and premiums, the spot market remains subdued due to weak netbacks on transpacific arbitrage spot deals, preventing significant uplift in trading activity.
- **In October, AltaGas and Royal Vopak announced a new initiative to optimize the Ridley Island Energy Export Facility (REEF), which is currently under construction.** Phase One of the REEF terminal is expected to be operational by the end of 2026, with LPG export capacity of approximately 55,000 b/d. The REEF Optimization One project reached its Final Investment Decision (FID) in October and will enhance REEF's throughput capacity by up to 25,000 b/d, with completion anticipated in the second half of 2027. Additionally, a second, larger optimization project is under evaluation, which could potentially increase the export capacity by another 60,000 b/d.
- **Butane inventories in both Canadian regions remain above the historical five-year averages.** Most of this stockpiling is in anticipation of higher demand during the winter months. Despite the surplus, prices have remained relatively stable, largely due to the expected strong demand during the gasoline blending season, which began in mid-September. Similarly, butane exports have remained relatively stable and at the two-year historical average level, despite the strong inventory levels.
- **Propane inventories are currently trending below the five-year historical average for this time of year.** Inventories are particularly low in Eastern Canada, leading to Canadian propane exports to the PADD 1 region effectively falling to zero over the past few months. While reduced exports to PADD 1 are common during the summer build season, the combination of weak inventory growth and low levels raises concerns about future supply to the Eastern Coast of the US. As a result, a sudden increase in demand, such as from a cold snap, could lead to significantly higher propane prices, since supplies from more distant regions would likely be necessary to meet this demand.
- **Dow Chemicals announced during its third-quarter earnings call in September that it will provide an update on its Path2Zero petrochemical expansion project at Fort Saskatchewan in January 2026.** Phase 1 of the project was originally scheduled for completion in 2027, with Phase 2 set to become operational in 2029. However, in the previous spring, Dow revealed a delay due to market volatility and macroeconomic uncertainty. At that time, the company expressed its long-term commitment to the project but announced a delay in investment and anticipated an approximate one-year postponement in the completion dates for both Phase 1 and Phase 2. During the most recent earnings call, Dow indicated that it is now more likely that the delays will extend to one to two years.

LPG prices have been revised down due to higher supply compared to the previous outlook

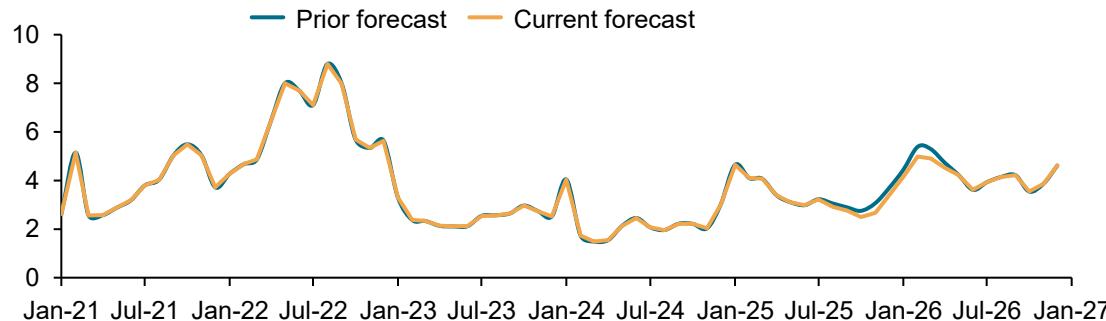
WTI price forecast comparison (\$/bbl)



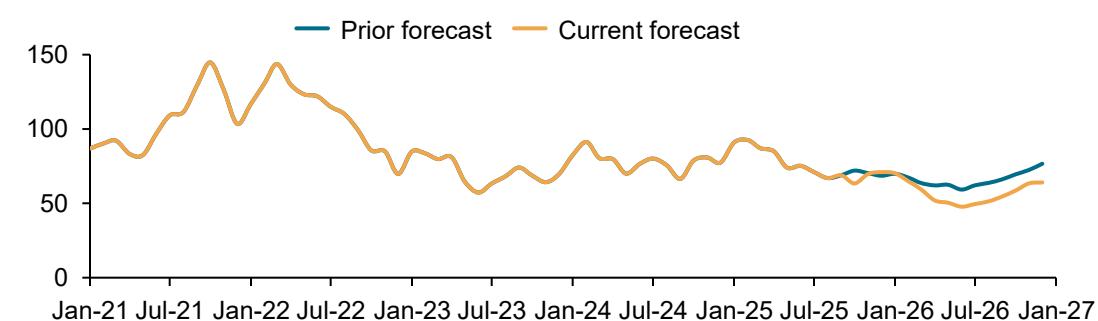
USGC ethane price comparison (cpg)



Henry Hub natural gas price comparison (\$/MMBtu)



USGC propane price comparison (cpg)

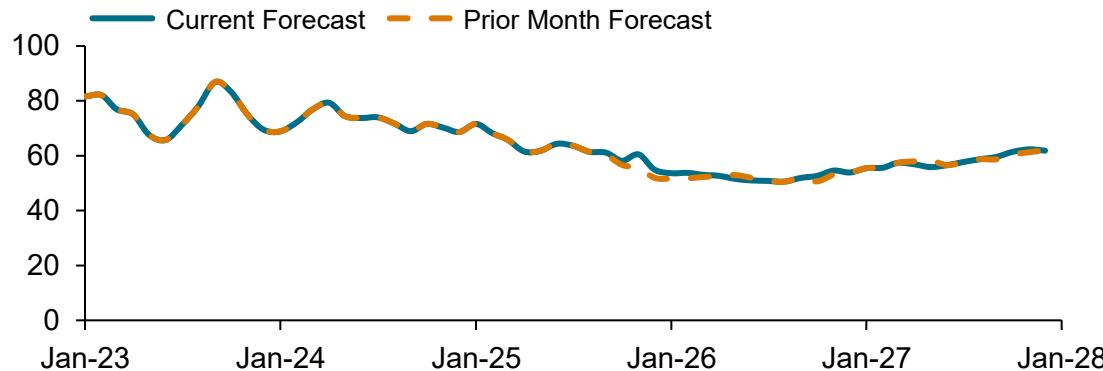


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

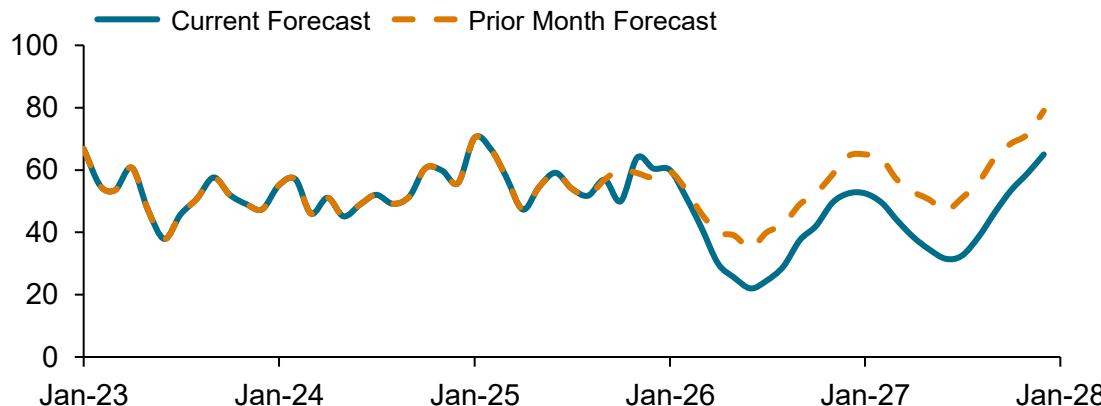
The looming increase in global LPG supply has resulted in a significant decrease in our price forecasts through 2026 and 2027

Edmonton condensate price forecast comparison (\$/bbl)

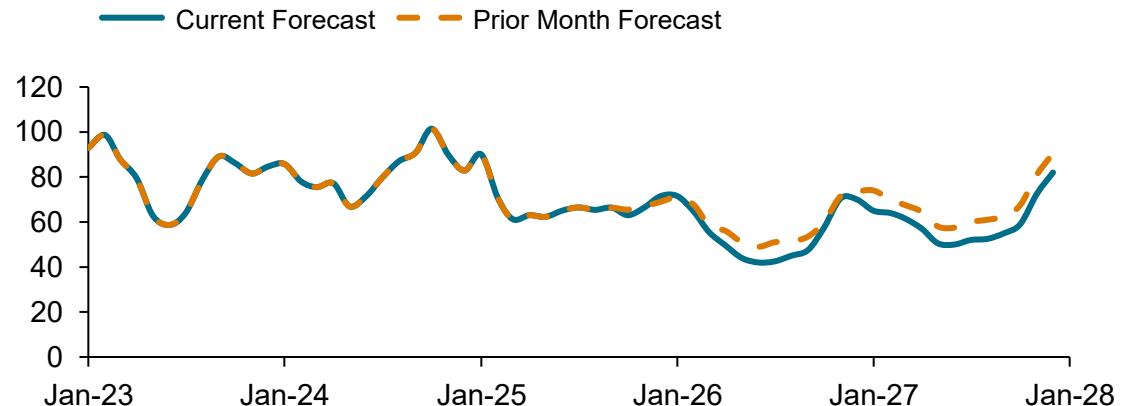


- The global LPG price forecast (2026-27) has been revised materially lower compared to the previous report. The main driver is a significant change in the upstream gas supply outlook.
- Higher Permian gas production, following an upward revision to the gas-to-oil ratio (GOR), has added incremental supply to the market. As a result, prices have adjusted downward to stimulate additional demand. Persistent weakness in the petrochemical sector has also contributed to the price weakness.
- Crude oil price forecasts have moved up slightly for November and December, reflecting the sanctioning of Rosneft and Lukoil by the US. November-dated Dated Brent has moved up \$5/b and December \$3/b.

Edmonton propane price forecast comparison (uscpg)



Edmonton field butane price forecast comparison (uscpg)



Data compiled October 31, 2025.

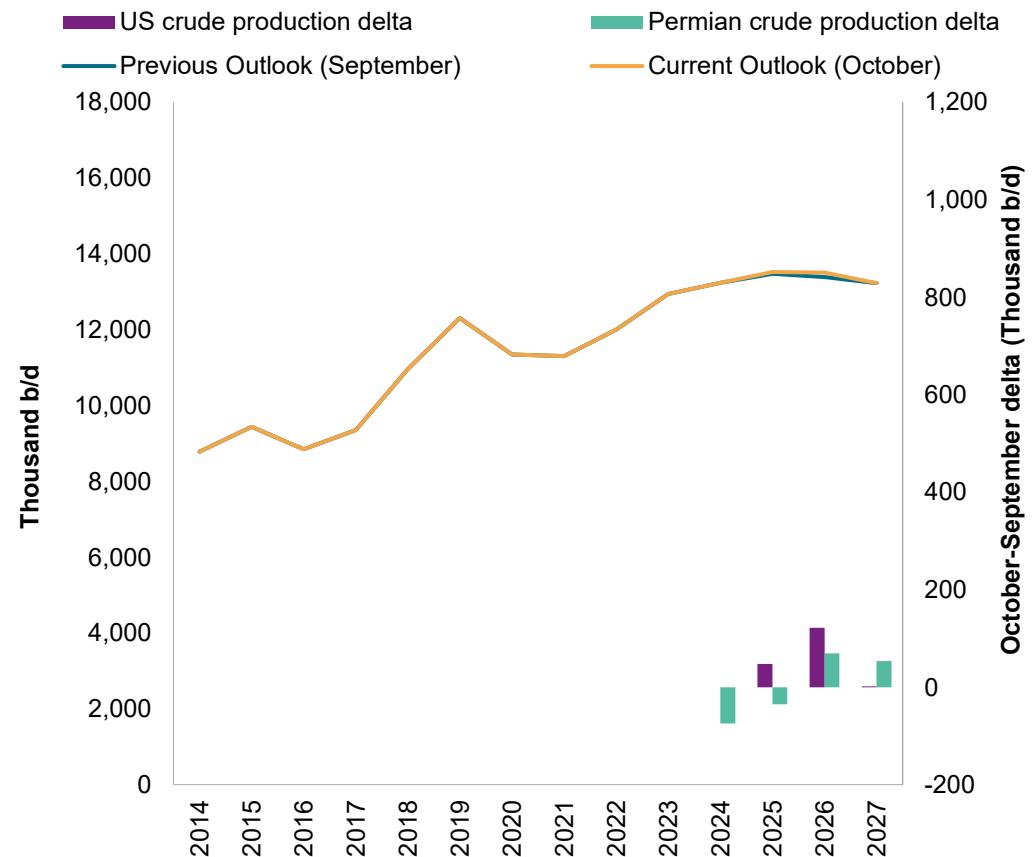
As of June 2025, the price quotes are from S&P Platts. The price outlook for the October 2025 short-term forecast (Current Forecast) has been extended to December 2027.

Sources: S&P Global Commodity Insights.

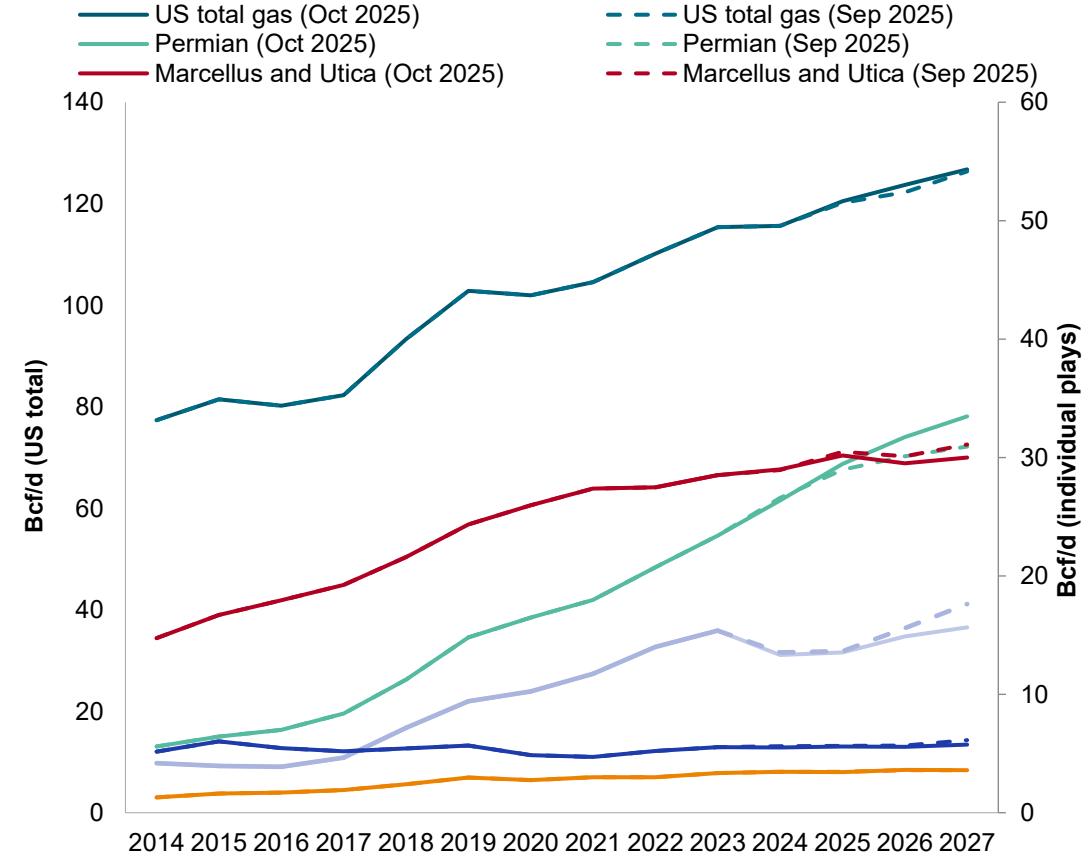
United States

Despite flat oil production, rising gas-to-oil ratios sustain robust associated gas growth in the forecast

US crude production outlook



US Lower-48 gas production outlook



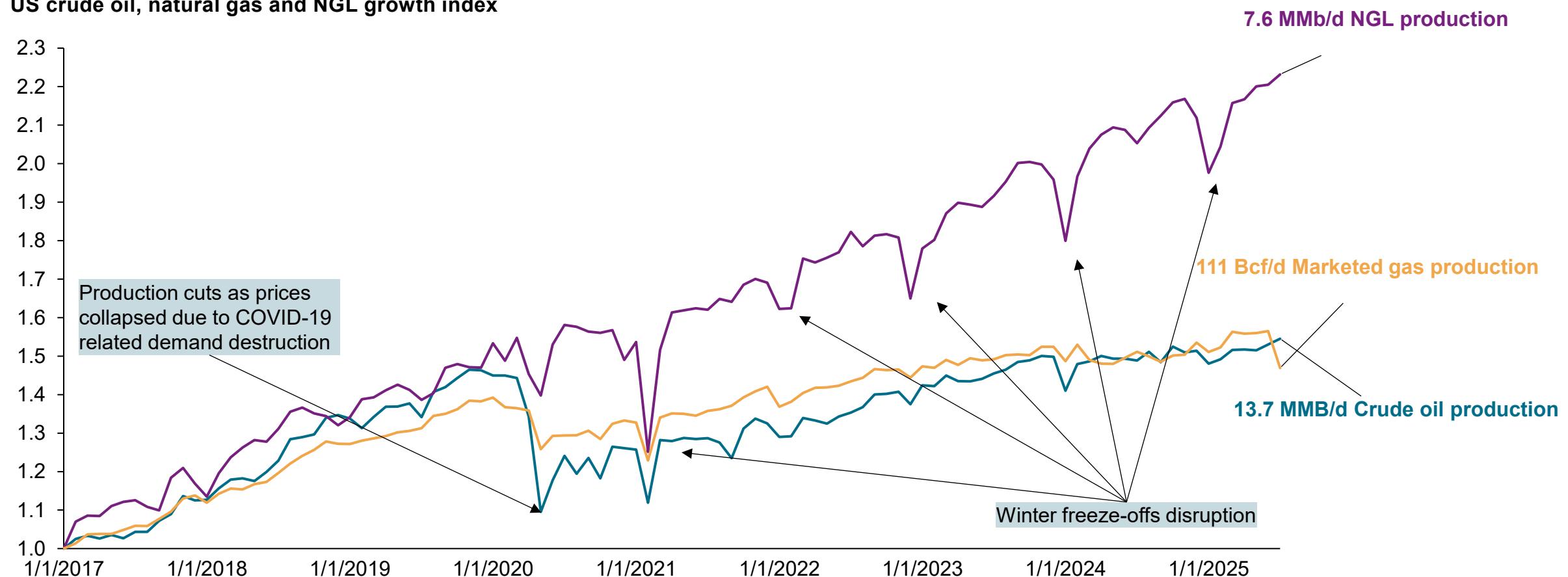
Notes: For additional information on oil and gas production [June 2025 US supply and rig update – March EIA numbers show continued Permian momentum, but rig and spud data foretell a slowdown; Haynesville finally gets out of first gear and US crude supply and price scenarios through 2035 – practical limit of 12.5 million b/d onshore US crude, less than \\$70/bbl nominal WTI puts the US gas market in a precarious position](#)

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

NGL growth outpacing crude and gas production – increasing oil-based associated gas and higher ethane recovery being the main contributors

US crude oil, natural gas and NGL growth index



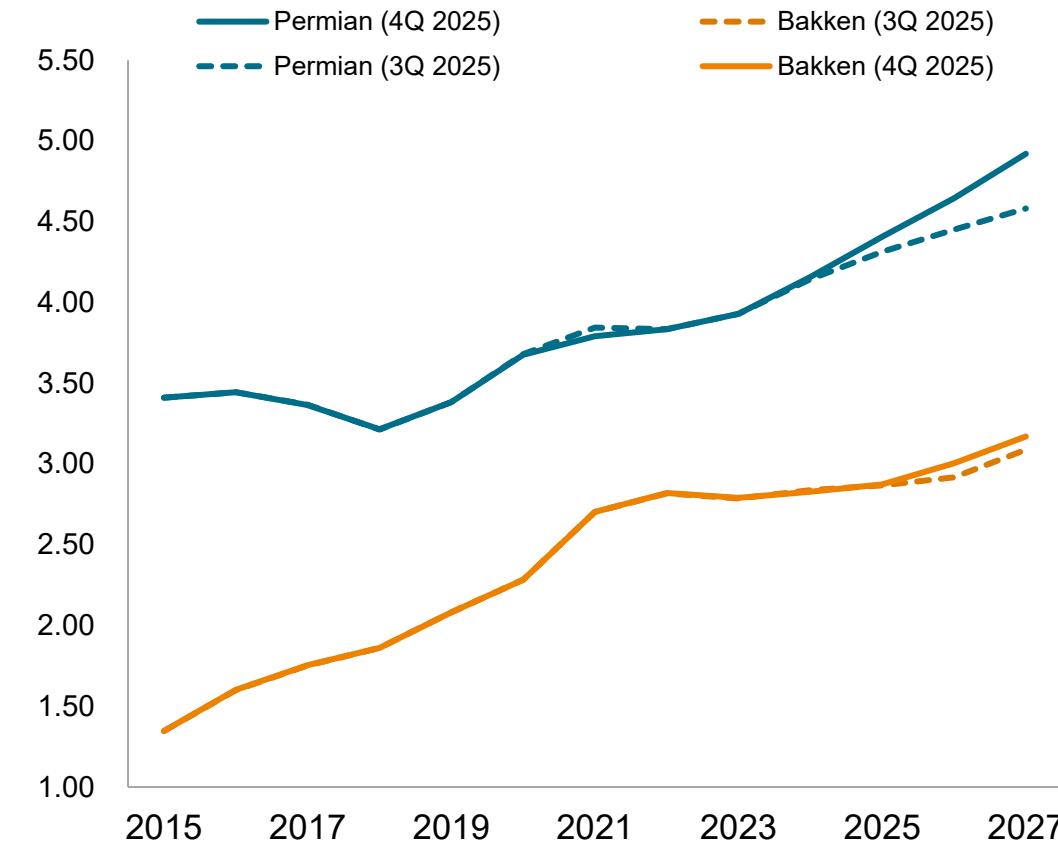
Data compiled October 31, 2025.

Marketed natural gas is show for gas production. NGL data only represents natural gas plant based and refinery NGLs are not included. Actual production data for latest EIA month is shown in the chart.

Source: S&P Global Commodity Insights, EIA.

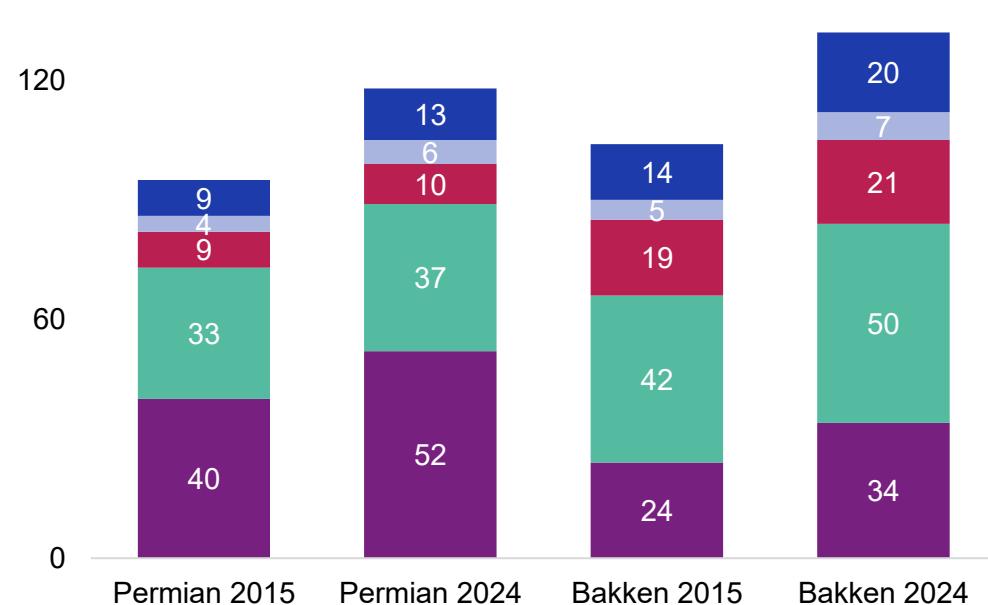
US supply has been benefiting by rising GORs (gas to oil ratio) and increasing GPM (gallons per mcf of gas)

Gas to oil ratio for key U.S. plays (mcf/bbl)



NGL yield per 1 Bcf/d of gas (thousand b/d)

■ Ethane ■ Propane ■ Normal Butane ■ Iso Butane ■ Natural Gasoline



The latest oil and gas outlook from the midstream team indicates an upward trend in GOR, prompting a revision of the natural gas forecast to reflect this trend.

Notes: For additional details on GOR please refer to [Gassed out: Maturing shale plays are becoming progressively gassier as oil production growth slows](#)

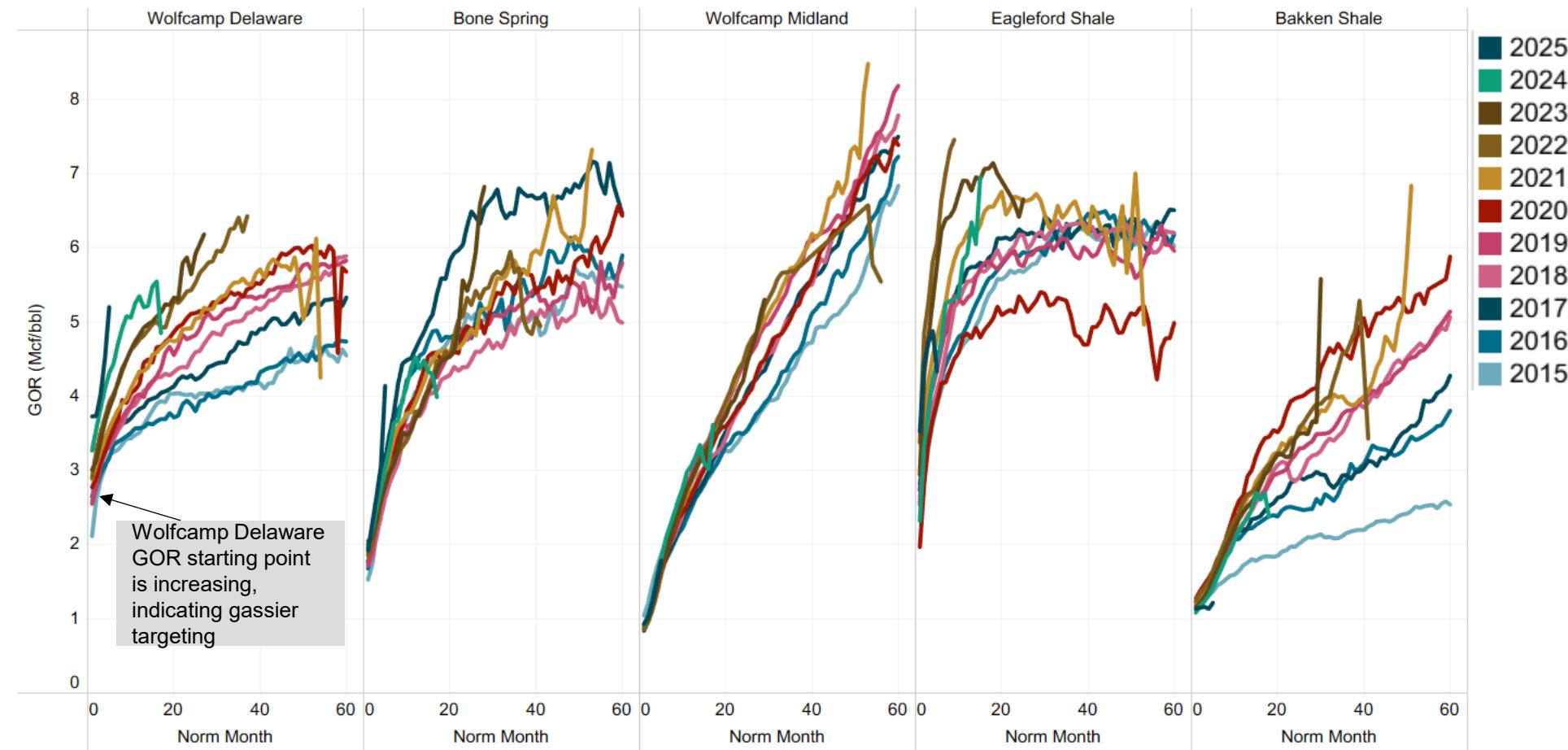
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

Permian GOR acceleration spreads to Bone Spring; starts in the Wolfcamp Delaware become gassier

More available in: [Onshore US gas out—GOR acceleration does not necessarily equal lower performance](#)

GOR by vintage year by play



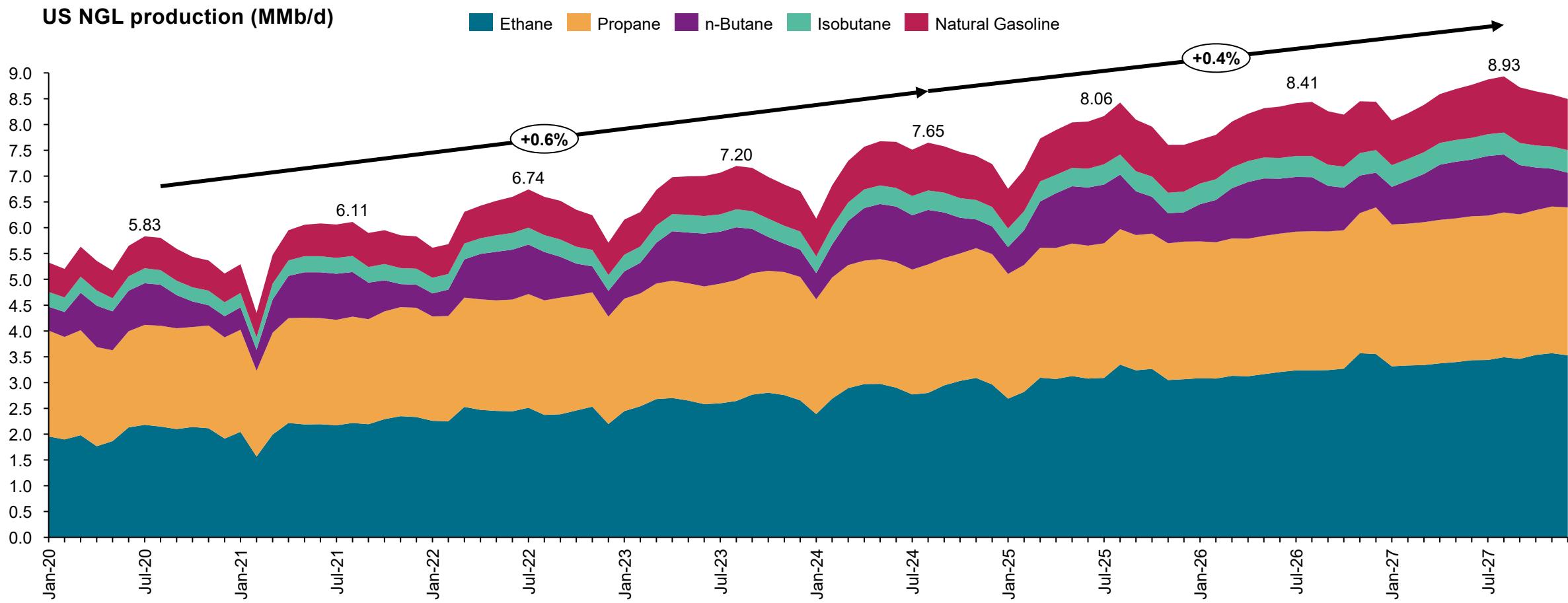
The color pattern reveals the state of GOR in the play; if blue is on the bottom, magenta in the middle, and brown and green on top, GOR is accelerating in newer wells; when mixed, GOR is steady over vintages

Wolfcamp Delaware and Wolfcamp Midland clearly have an accelerating GOR in newer wells

Bakken GOR acceleration stalled in recent (brown/green) years

Bone Spring GOR accelerated in 2024 after years of stability; Eagle Ford was steady until 2021/22 when operators went gassy in starts, 2024 returning to form in early results

NGL production growth to remain robust despite flat oil output, driven by higher GORs and increased ethane recovery

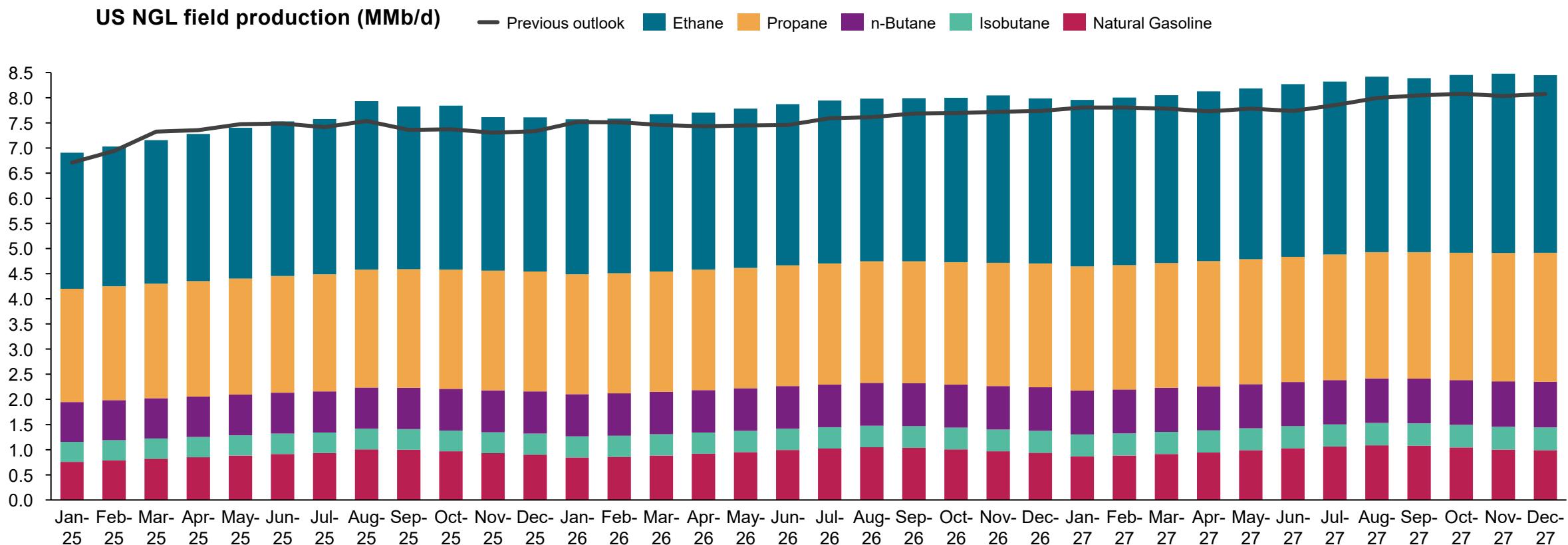


Data compiled October 31, 2025.

Note: Production includes from natural gas processing and refineries.

Sources: S&P Global Commodity Insights; US Energy Information Administration (history).

NGL field production increased by 5% in average through 2025 -2027 compared to the last outlook with growing GOR



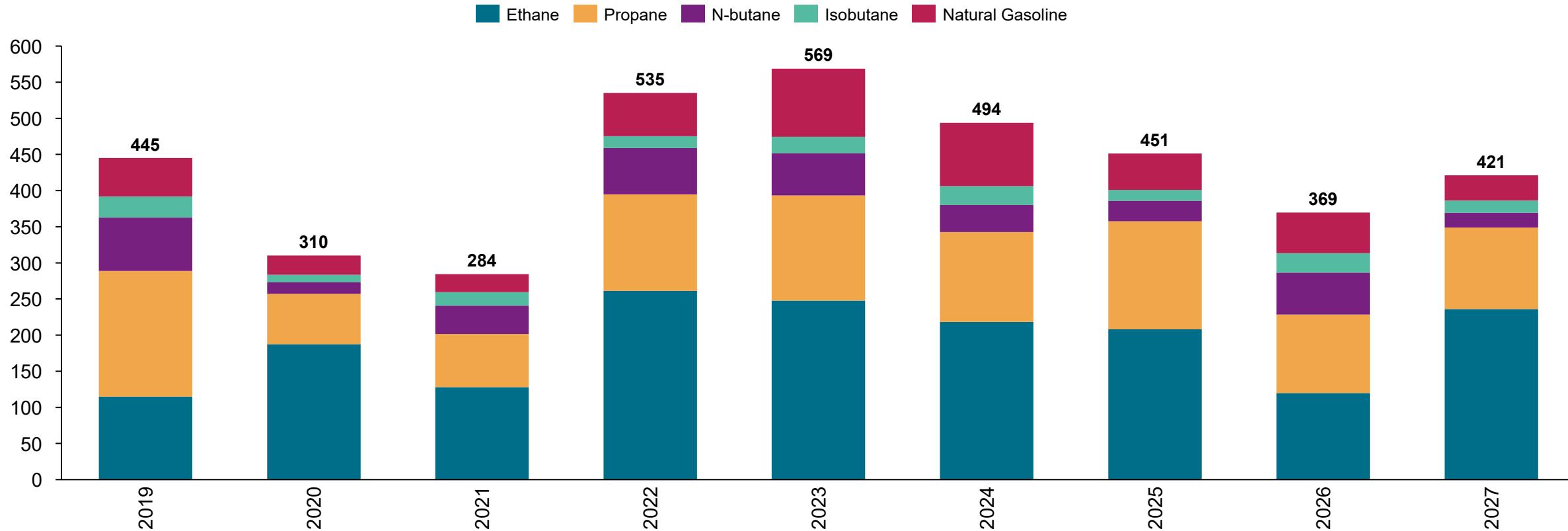
Data compiled October 31, 2025.

Note: Production doesn't include refineries.

Sources: S&P Global Commodity Insights; US Energy Information Administration (history).

Strong associated gas growth and higher ethane recovery to drive NGL supply in 2026–27

Year-over-Year change in US NGL production by product (thousand b/d)



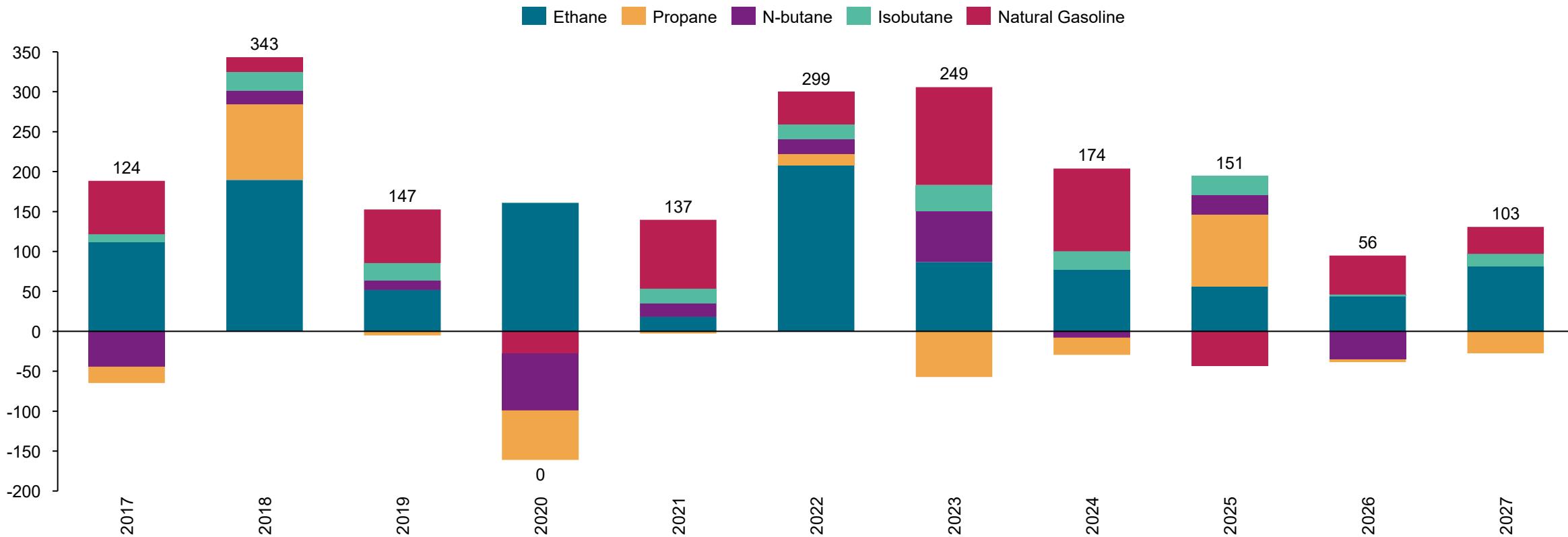
Data compiled October 31, 2025.

Production includes both natural gas and refineries.

Source: S&P Global Commodity Insights.

Limited domestic demand growth, with heating season accounting for most 2025 gains

Year-over-Year change in US NGL domestic demand by product (thousand b/d)



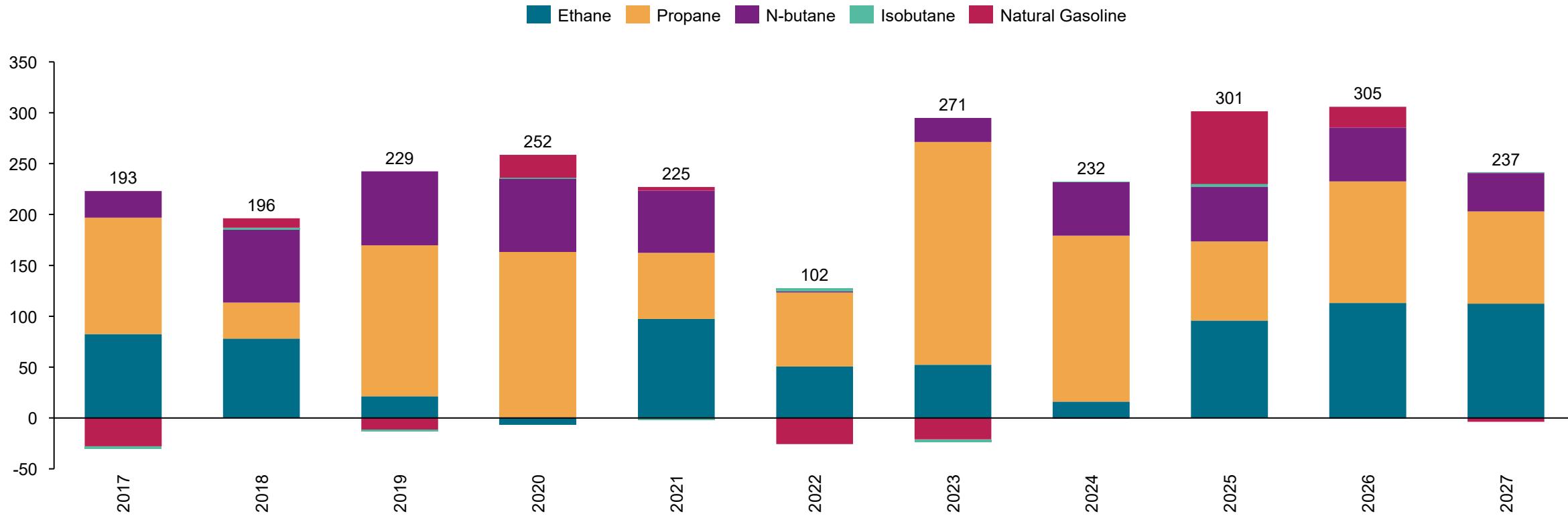
Data compiled October 31, 2025.

Note: Natural gasoline demand includes volumes that are blended with crude and naphtha. This is represented by "other" demand in natural gasoline balance.

Source: S&P Global Commodity Insights.

NGL export momentum is expected to continue through 2026 and 2027, supported by new ethane and LPG export capacity

Year-over-Year change in US NGL exports by product (thousand b/d)

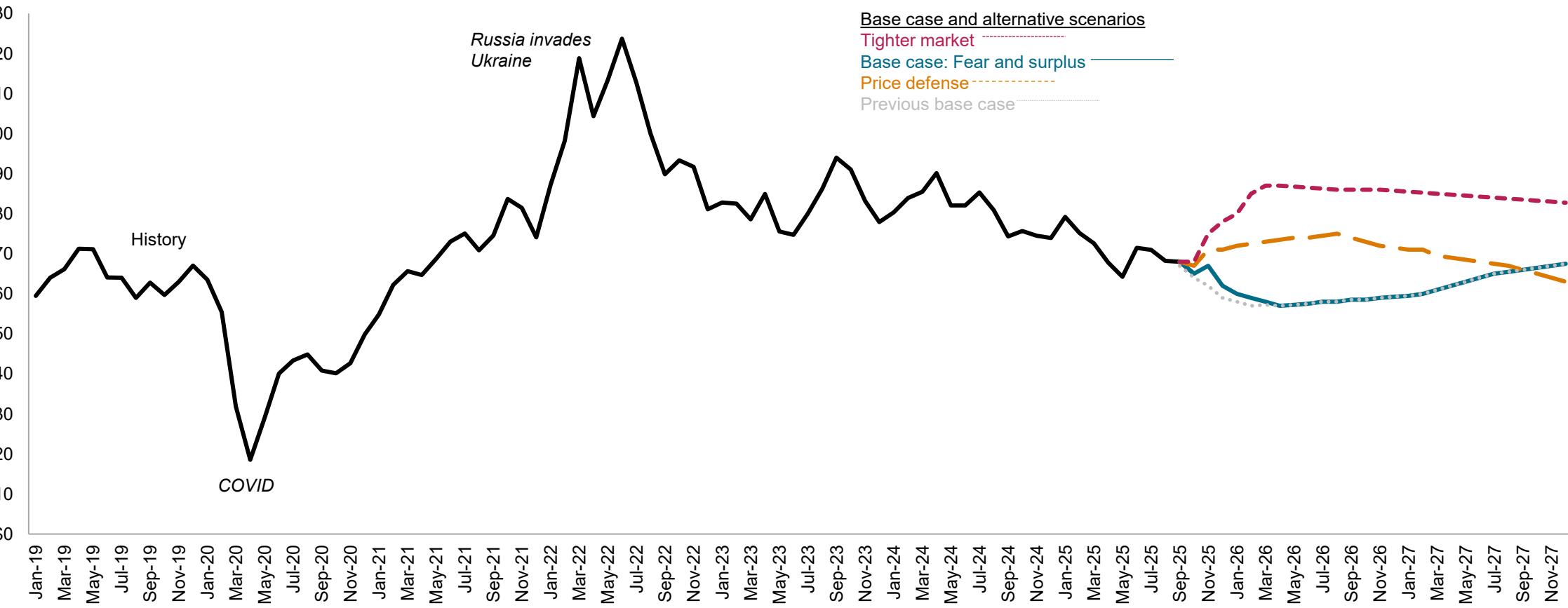


Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Greater risk to supply has increased near-term price outlook, but supply surplus limits upward moves in our base case

S&P Global Commodity Insights Dated Brent price outlook (\$/b)



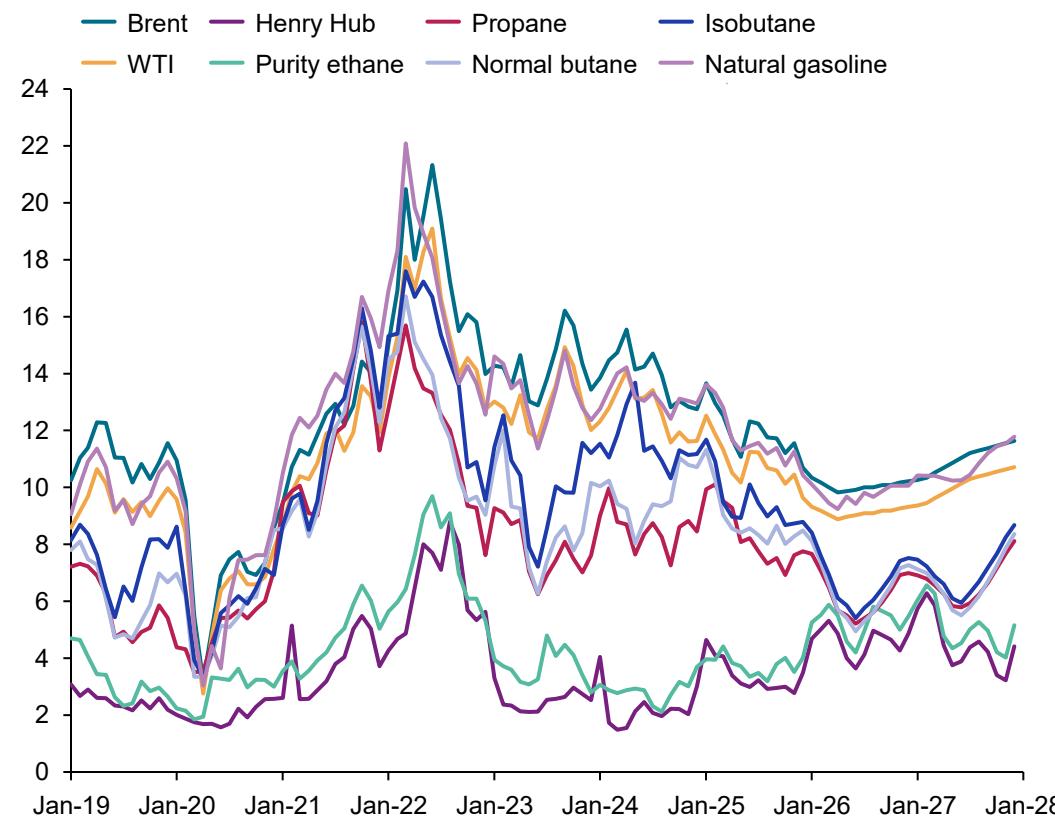
Data compiled Oct. 29, 2025.

Historical Dated Brent prices from Platts.

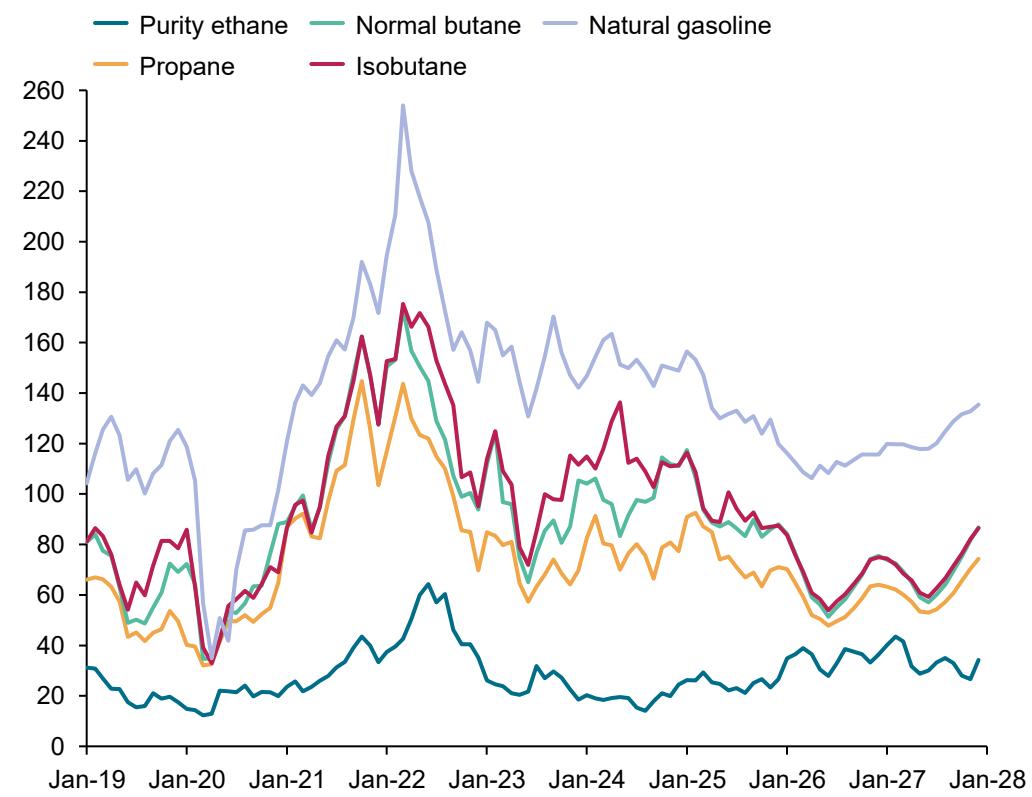
Source: S&P Global Commodity Insights.

With crude prices declining and natural gas prices rising, NGL prices are expected to converge through 2026–27

Crude, oil and NGL prices (\$/MMBtu)



Mont Belvieu NGL prices (cpg)

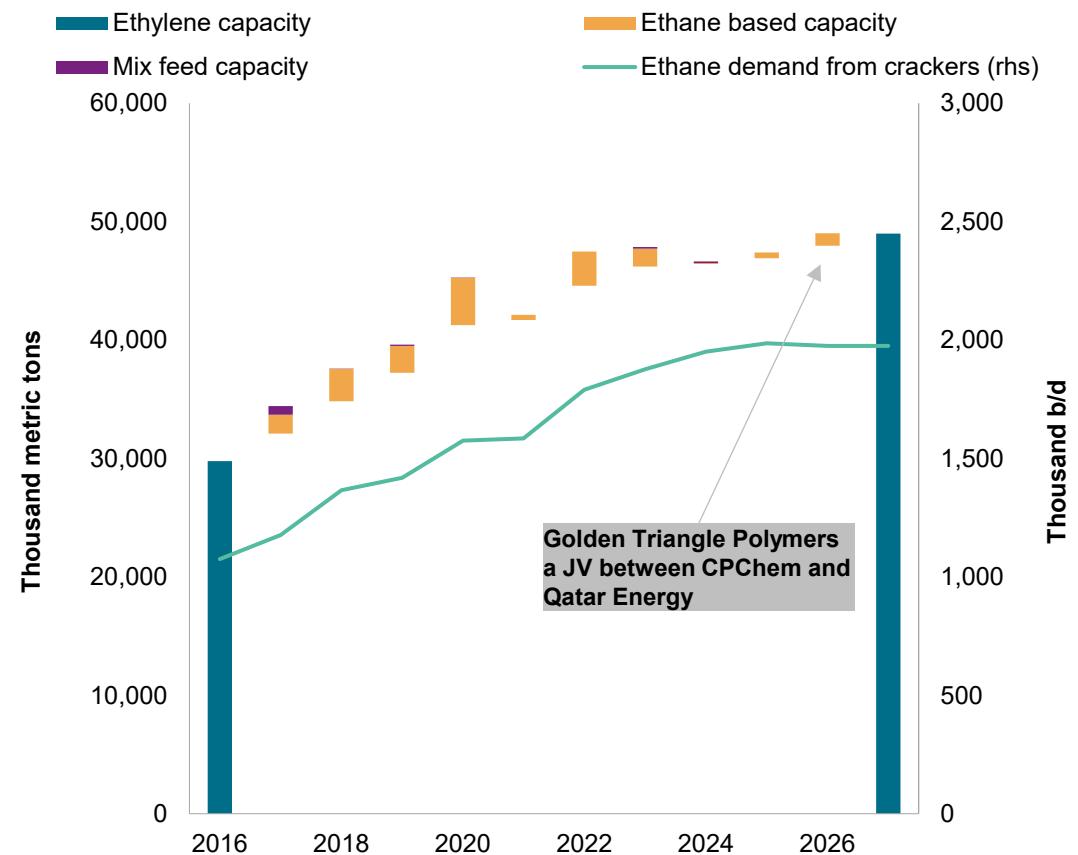


Data compiled October 31, 2025.

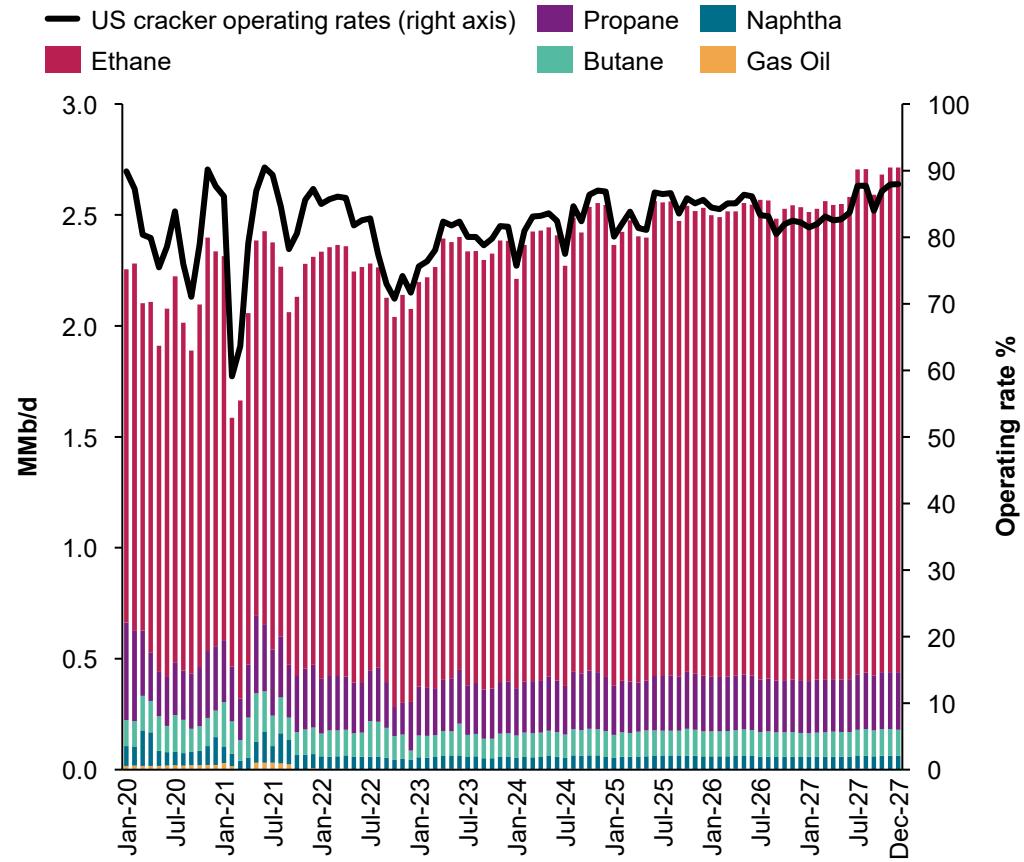
Sources: S&P Global Commodity Insights.

US crackers expected to run at around 85% operating rates in 2H 2025, and 84% in 2026 as ethane-based ethylene production remains advantaged globally

US ethylene capacity additions and ethane demand



US cracker operating rates and feedstock consumption

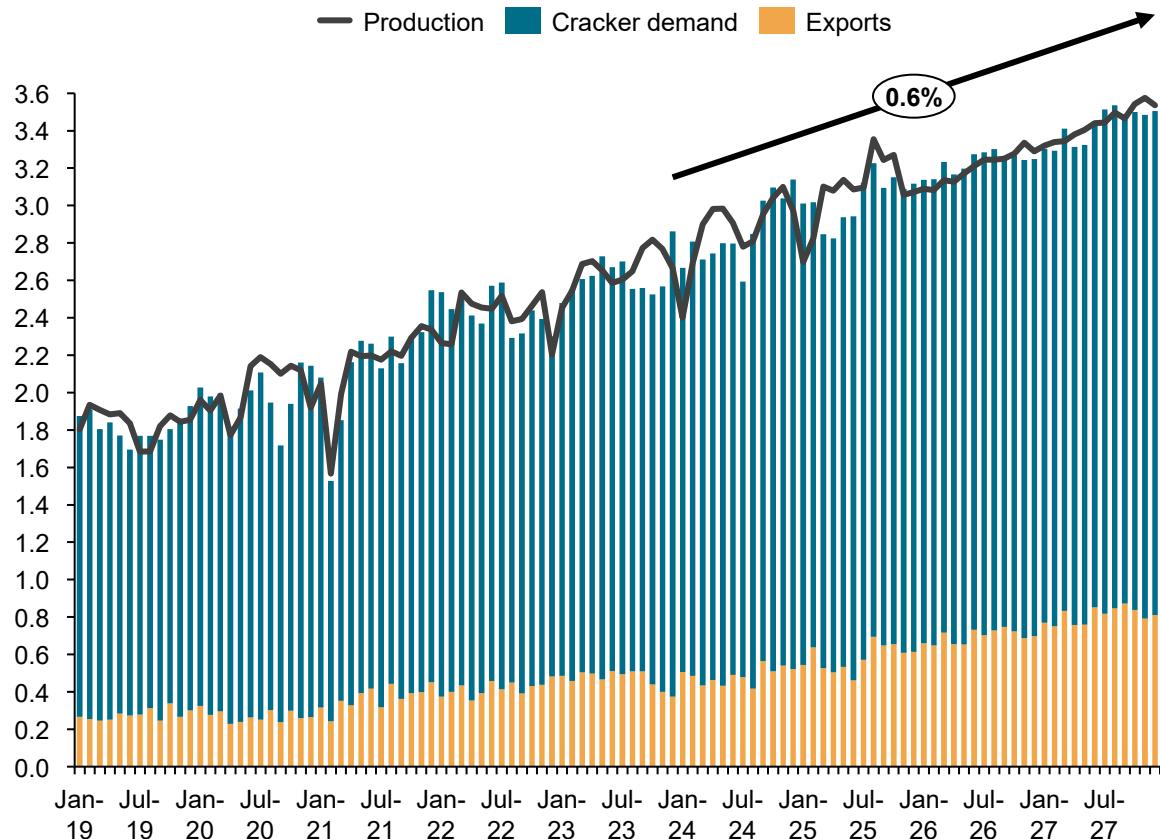


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

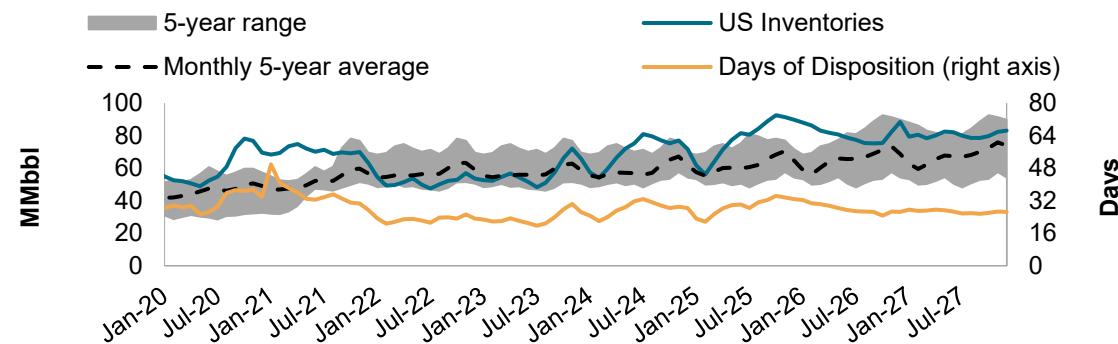
U.S. ethane exports continue to be robust through 2027

US ethane production and demand (MMb/d)



- The demand for ethane in China has fully recovered** after the ethane export licensing turmoil, leading to positive outcomes for suppliers and exporters.
- The ethane export is projected to increase in 2026/27.** The export outlook has taken into consideration Wanhua 1 and Wanhua 2 upcoming projects in China.
- Domestic demand remains stable as ethane-based ethylene production in the US remains advantaged over other feedstocks globally.** US ethylene operating rates are at about 86% in October. The only expected expansion in the forecast period is the CP Chem/Qatar Energy's ethane cracker in 2026, and it is not expected to be delayed.
- Ethane inventories increased in July 80 million barrels** from 77 million barrels in June. Primary reason for the built is driven by the robust production, supported by the wider frac spreads. However, the ethane frac spread could fluctuate because of the volatile gas prices.

US ethane Inventory

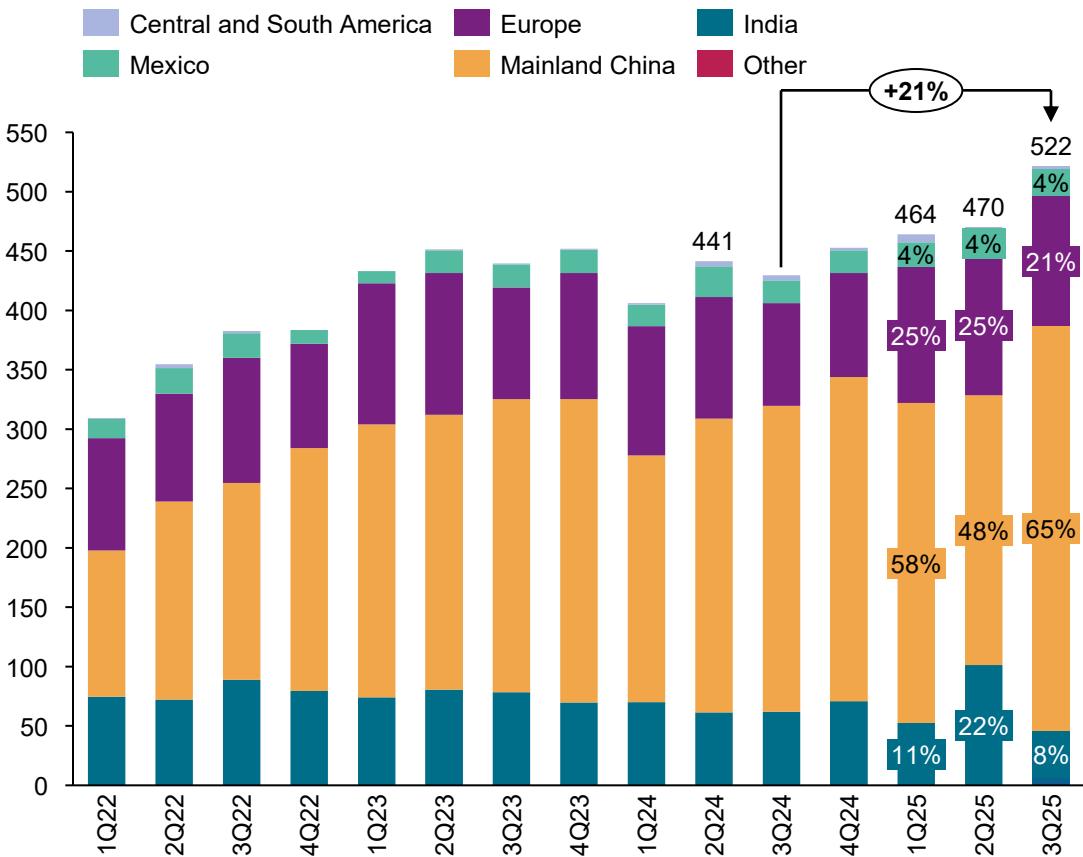


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights; US Energy Information Administration.

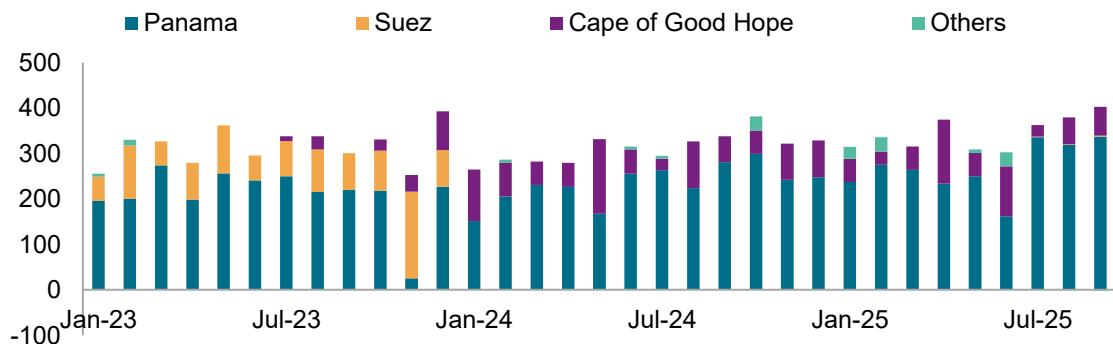
Third-quarter 2025 waterborne ethane exports have fully recovered to Mainland China

US waterborne ethane exports (thousand b/d)



- Ethane exports in 3Q25 are fully recovered.** After the largest drop due to BIS' ethane export licensing requirement for mainland China, exports rebounded in July when the requirement was lifted. Exports in August exceeded expectations, effectively compensating for the decline observed in July. As of September, the overall outflow remains strong, indicating a resilient export market.
- India typically takes about 70-75 thousand barrels per day of US ethane.** However, there has been an increase in U.S. ethane shipments to India during the second quarter. This uptick can be attributed to the rerouting of vessels originally bound for China in June, which has positively influenced the overall export direction towards India in 2Q2025.
- Currently, the global ethane trade market is served by 31 Very Large Ethane Carriers (VLECs),** with 9 new vessels expected to be delivered in 2025-2026 and an additional 49 on order for delivery between 2026 and 2028. This expansion of the VLEC fleet is anticipated to boost ethane exports.

US Ethane liftings to Asia by route (Thousand b/d)



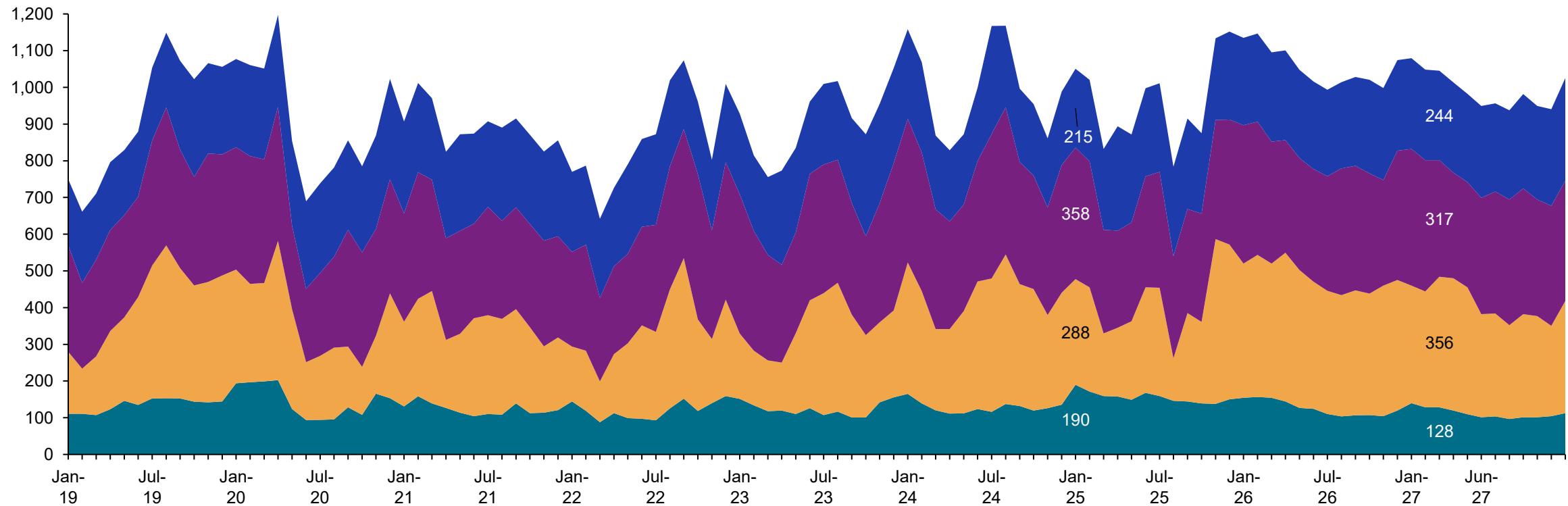
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights, Commodities at Sea.

Growing ethane availability will maintain steady rejection levels despite rising demand

US ethane rejection (thousand b/d)

PADD 1 PADD 2 PADD 3 PADD 4

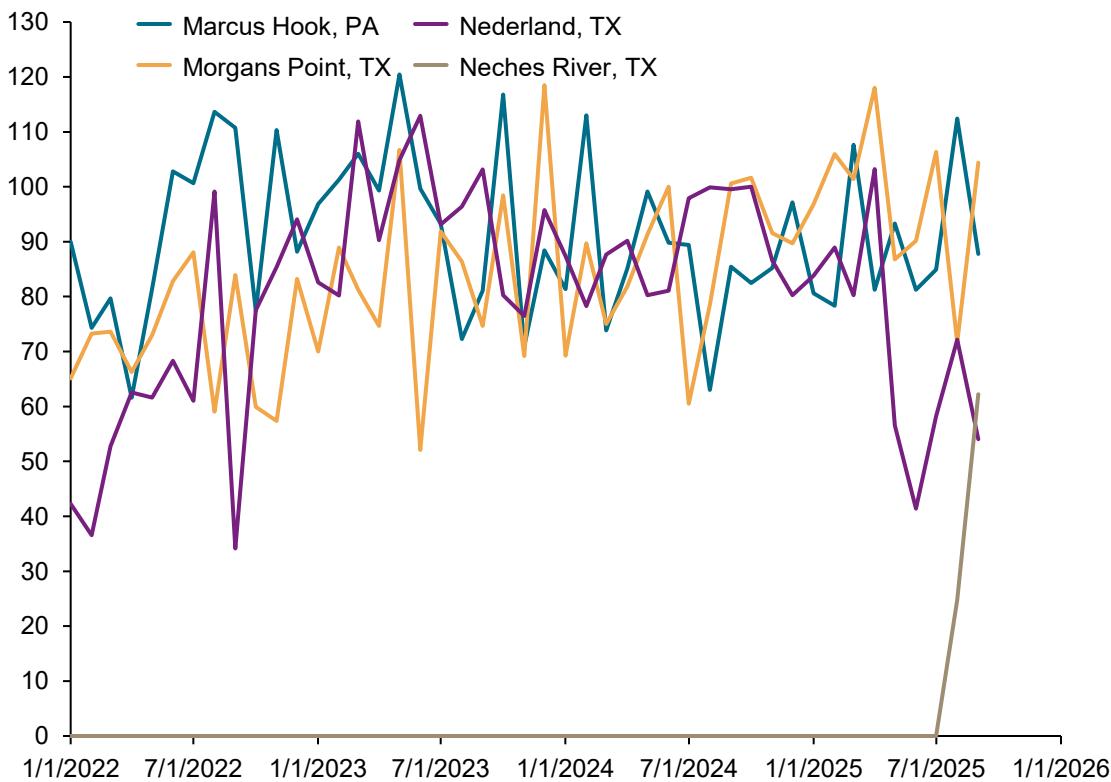


Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

New ethane export terminal and other expansions will increase ethane exports

United States ethane export terminal utilization (%)



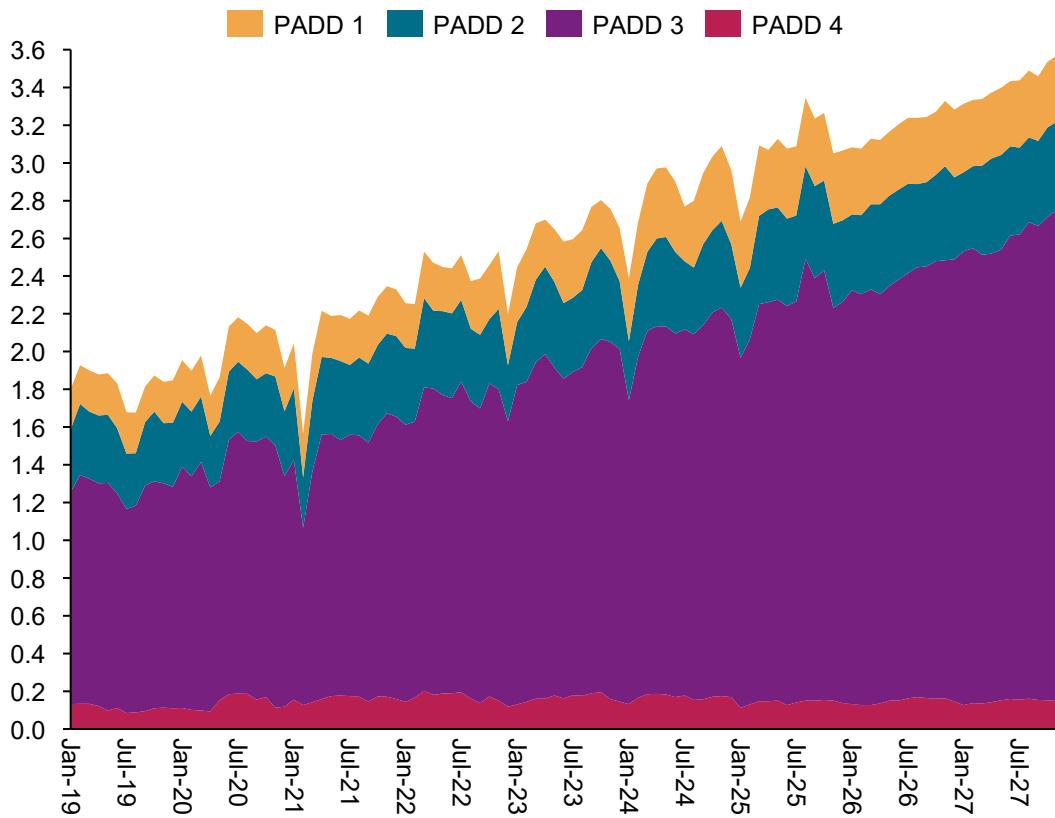
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights, company sources.

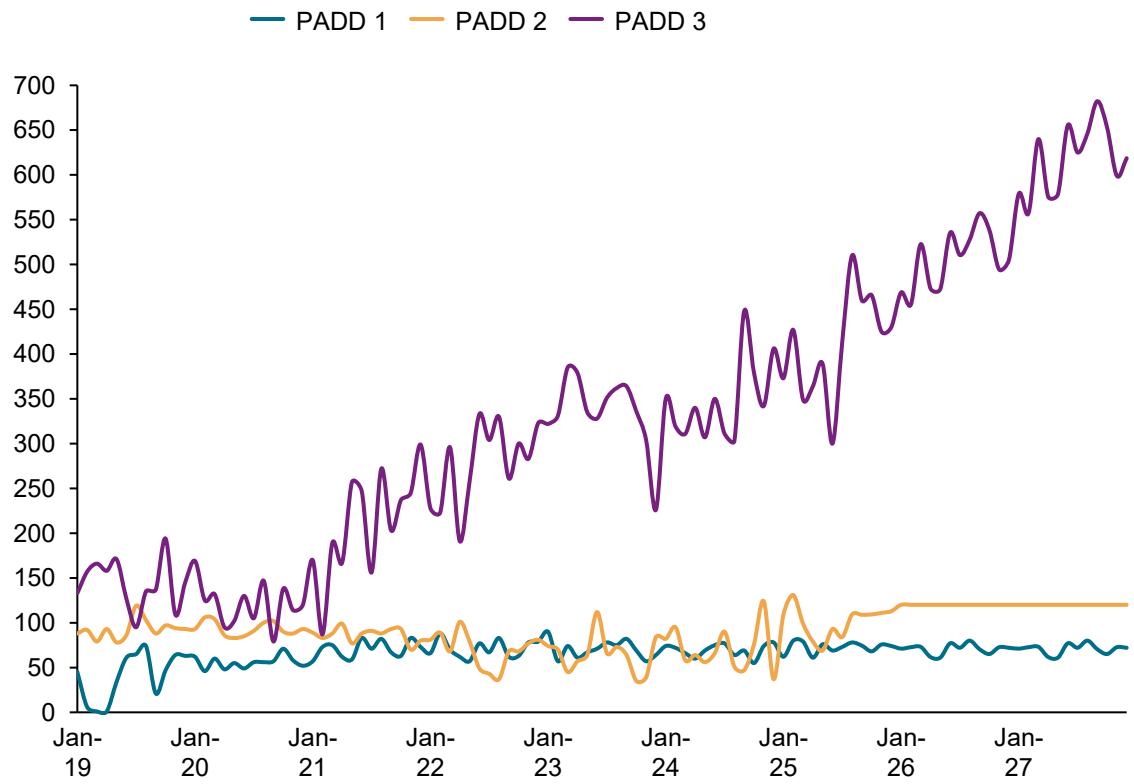
- **Marcus Hook terminal:** We estimate Energy Transfer's Marcus Hook terminal in the U.S. Northeast can export approximately 75,000 b/d of ethane and is currently operating near full capacity. Exports from this terminal are primarily sent to Europe. Construction is underway for 900,000 barrels of refrigerated ethane storage and 20,000 b/d of additional chilling capacity.
- **Morgan's Point terminal:** Enterprise's Morgan's Point terminal on the U.S. Gulf Coast has a loading rate of about 10,000 barrels per hour, giving it a nameplate capacity of 240,000 b/d. In late December 2024, Enterprise completed the conversion of one 120,000 b/d refrigeration train into a flexible unit capable of loading both ethane and ethylene, allowing the terminal to export either product from that train.
- **Nederland terminal:** Energy Transfer's Orbit facility (a joint venture with Satellite) at Nederland has a nameplate capacity of 180,000 b/d. Waterborne data show the terminal exported 157,000 b/d in 4Q 2023, primarily supplying Satellite's Lianyungang ethane cracker in China. Ethane loading capability at Nederland began in May 2025 as part of the Flexport expansion, which will add up to 250,000 b/d of total NGL export capacity by late 2025. Based on our estimates, fully contracted operations will start in January 2026, with roughly an even split between ethane/ethylene and propane exports.
- **Neches River terminal:** Enterprise's Neches River terminal (Phase 1) was completed and began operations at the end of July 2025. This phase includes a 120,000 b/d ethane-only refrigeration train, a new loading dock, and 900,000 barrels of refrigerated ethane storage. Phase 2 will add a flexible ethane/propane train capable of loading up to 180,000 b/d of ethane or 360,000 b/d of propane, or a combination of the two. Completion is expected in 1H 2026.

Ethane recovery to increase in the forecast on robust exports and incremental domestic cracker feedstock demand

US ethane production by PADD (MMb/d)



US ethane exports by PADD (thousand b/d)

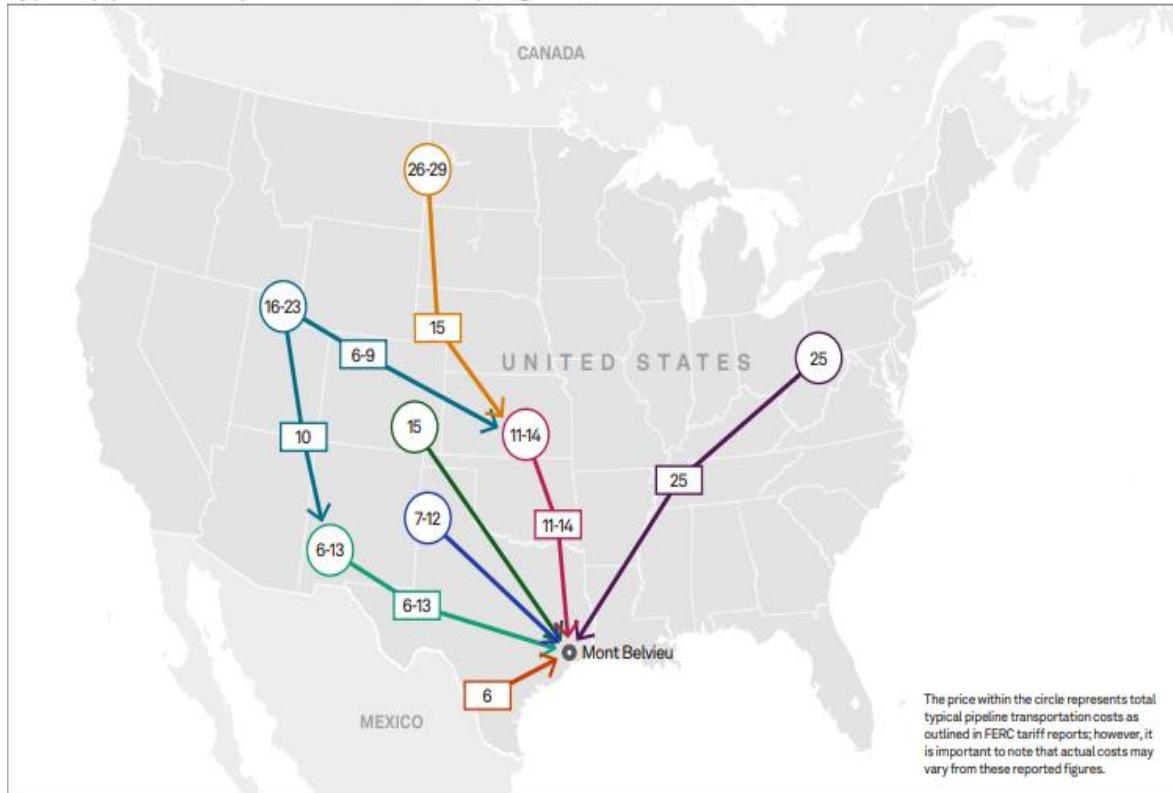


Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

The marginal barrel of ethane sets the price for ethane, and it is determined by cost to deliver from the supply source to the demand center

Typical pipeline transportation cost (cents per gallon)

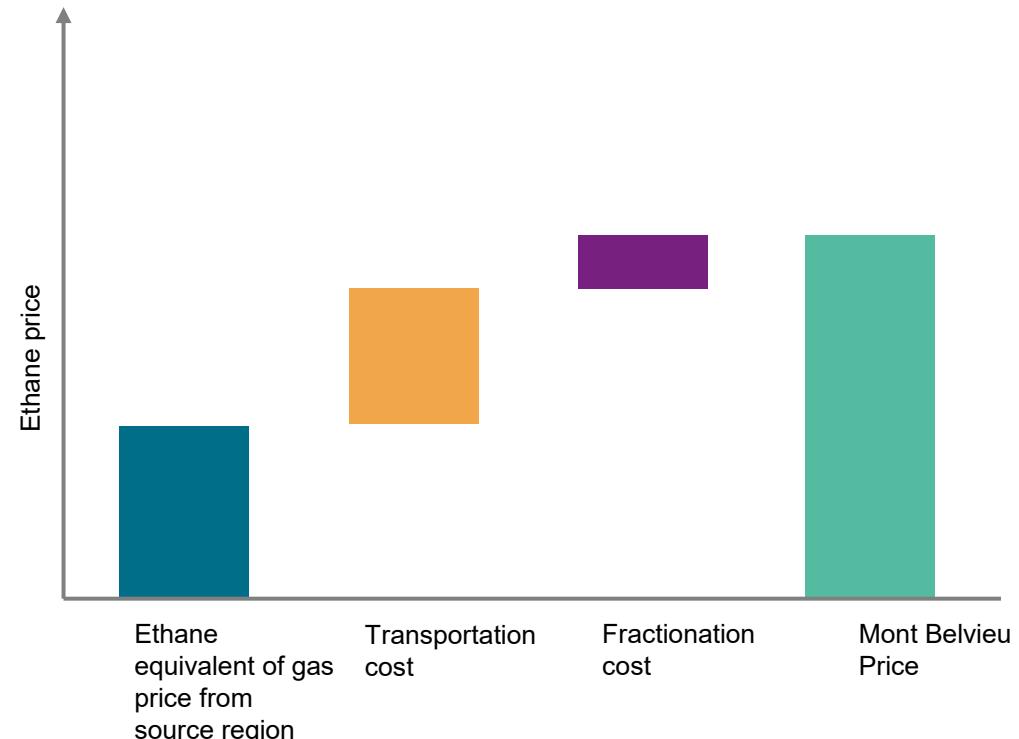


Data compiled Sept. 24, 2025.

Source: S&P Global Commodity Insights: 251772-01.

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Ethane prices are based on gas prices in marginal supply region plus the cost to deliver ethane to Mont Belvieu

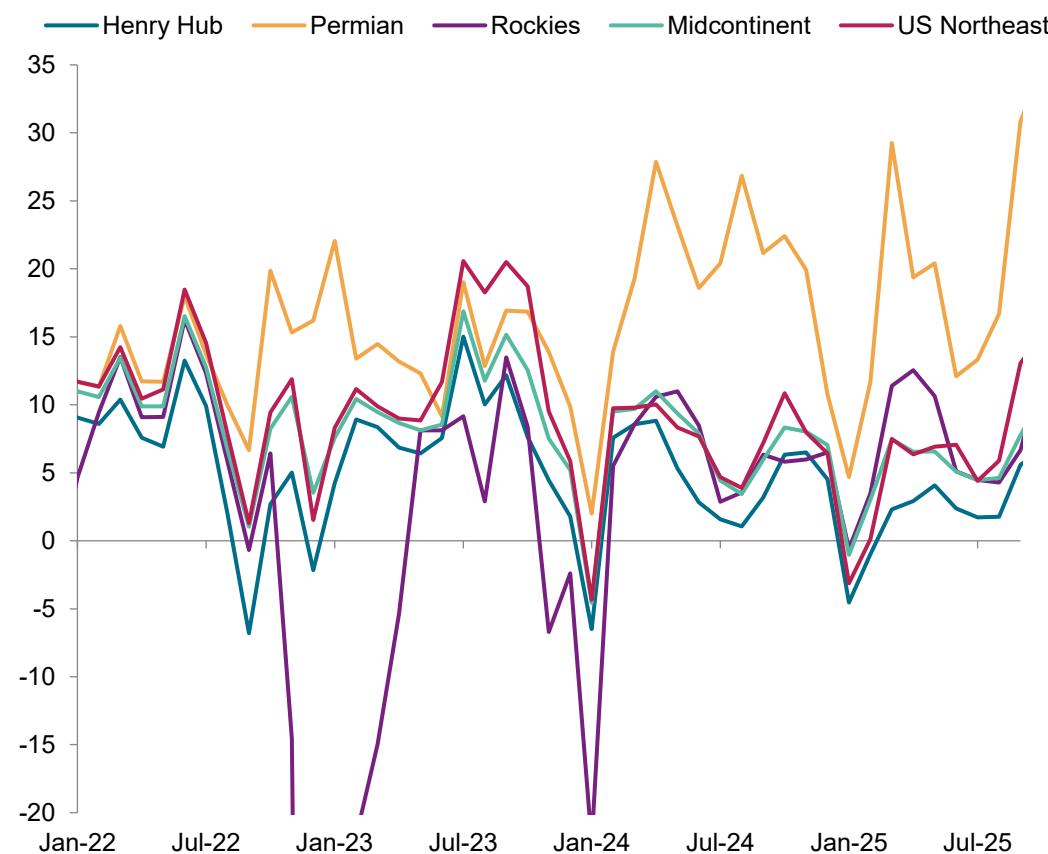


Note: Figure indicates typical average pipeline costs to deliver ethane from supply regions to USGC. For details on price methodology please refer to [NGL — Connecting energy and chemicals: How S&P Global Commodity Insights analyzes and forecasts NGL prices](#).

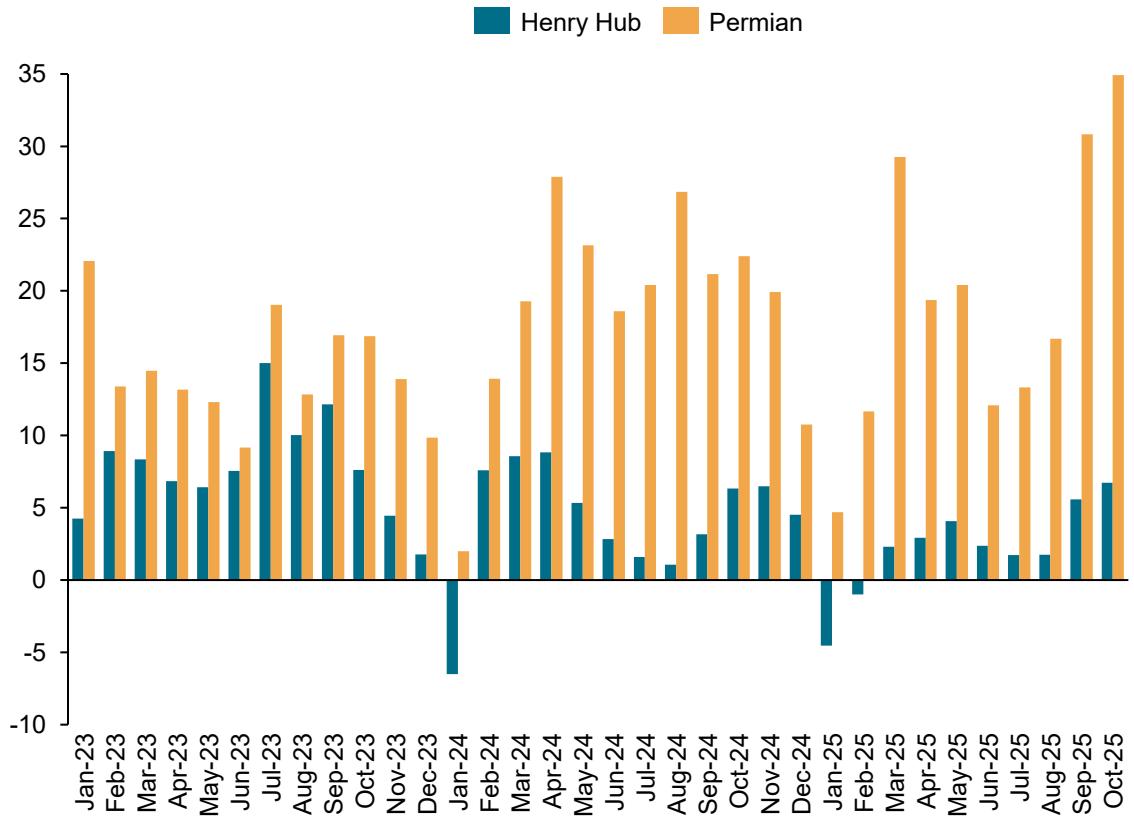
Source: S&P Global Commodity Insights.

Henry Hub frac spread stays positive while frac spread to Waha is above 25 cpg—supporting ethane recovery in the region

Ethane frac spreads (cpg)



Henry Hub versus Permian frac spread (cpg)



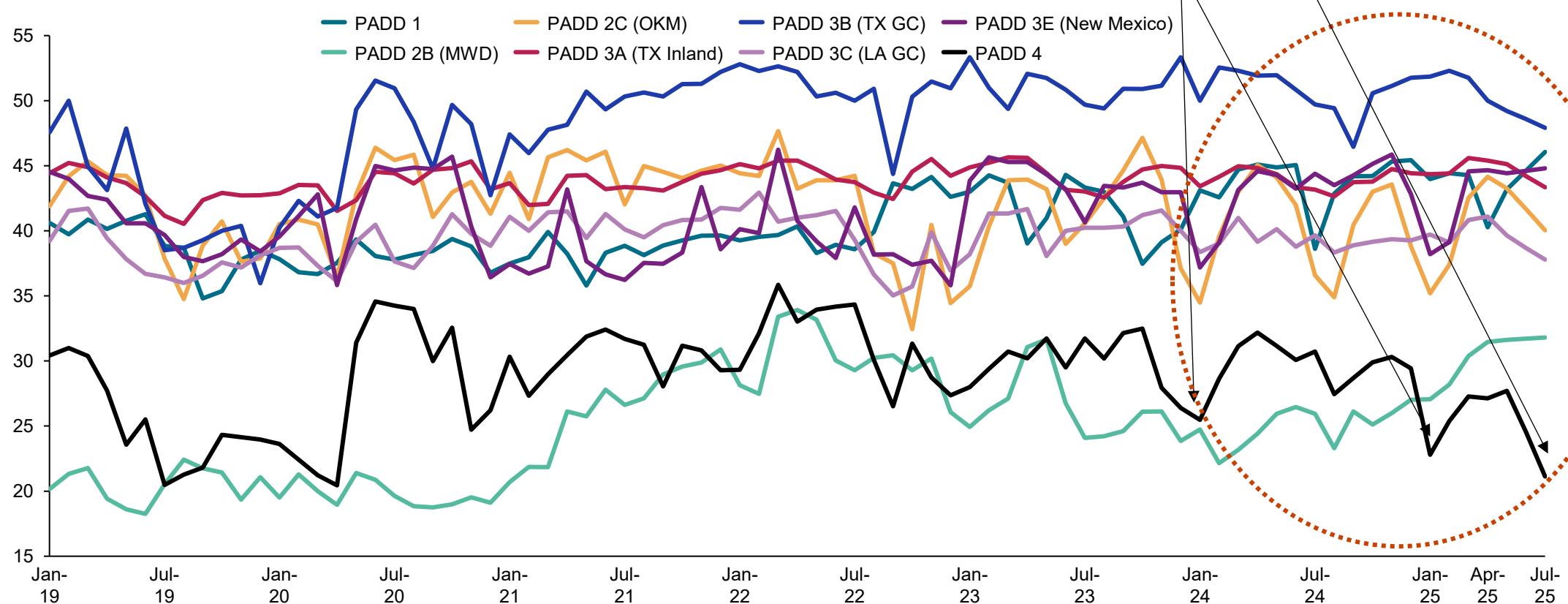
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Ethane percentage within the y-grade barrel

A decrease in the percentage of ethane within the y-grade barrel indicates reduced ethane recovery or extraction from natural gas. This typically occurs when the economics of ethane recovery, represented as the frac spread against natural gas prices, decline.

Ethane as a percent of y-grade (%)

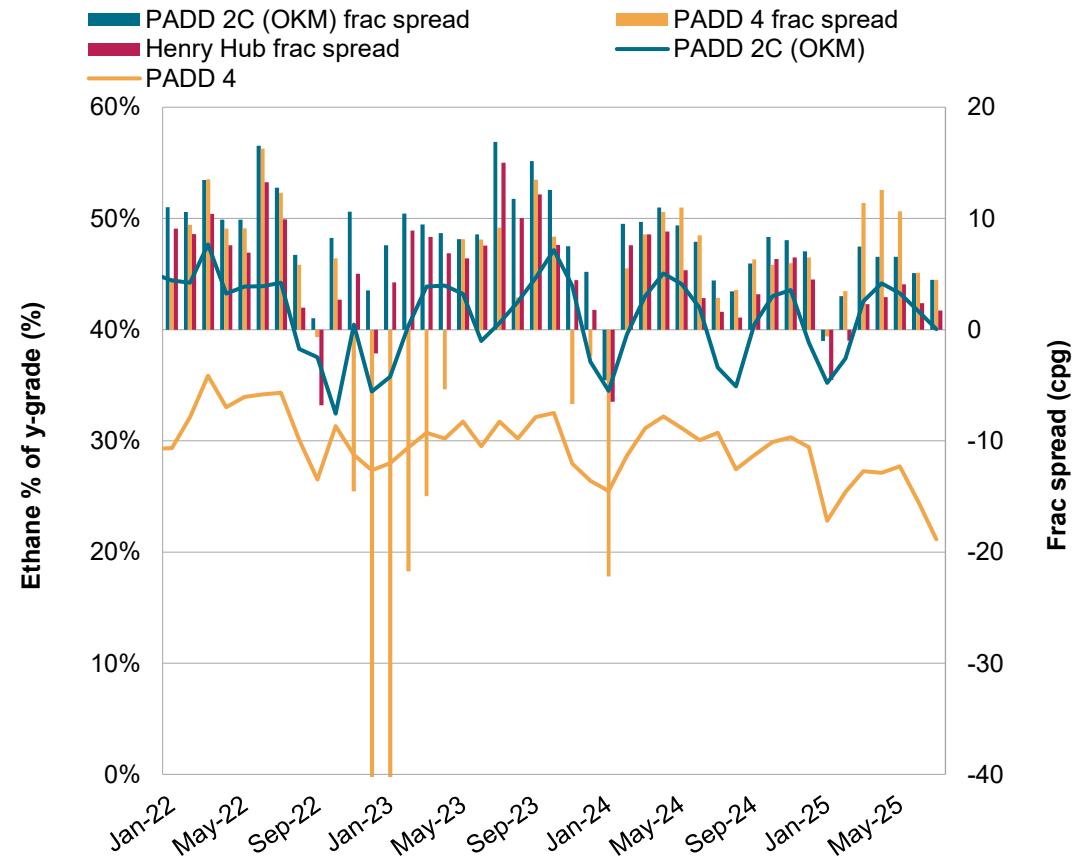


Data compiled October 31, 2025.

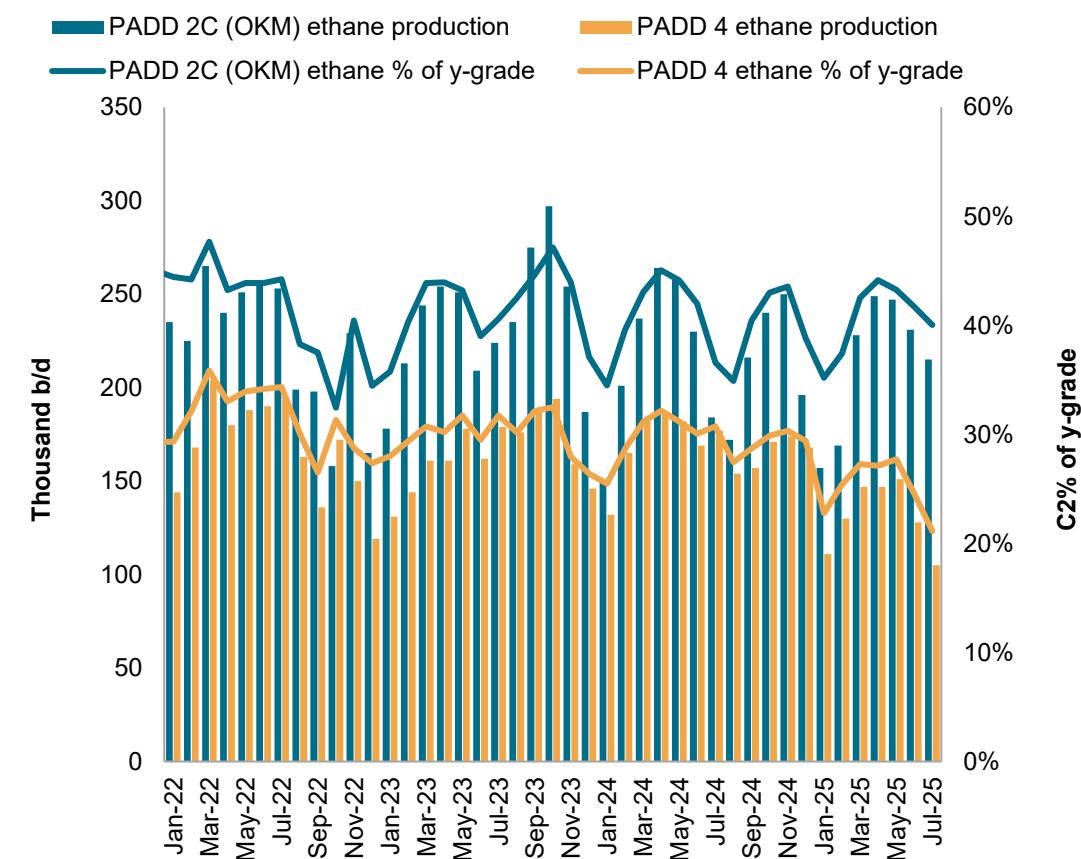
Sources: S&P Global Commodity Insights, US Energy Information Administration.

Ethane production in PADD 2 (OKM) and PADD 4 decreases by a total of 150,000 b/d to 220,000 b/d when ethane recovery economics become unfavorable

Ethane production and frac spread relationship



Ethane production vs ethane % of y-grade

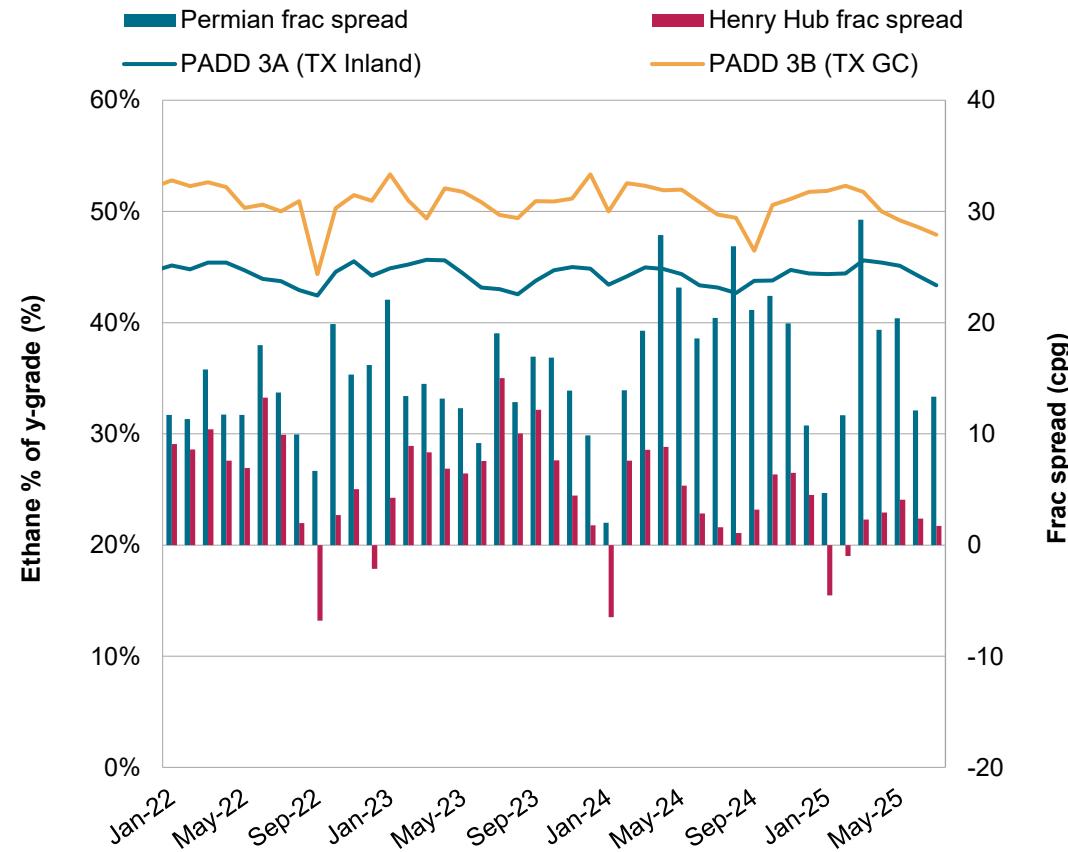


Data compiled October 31, 2025.

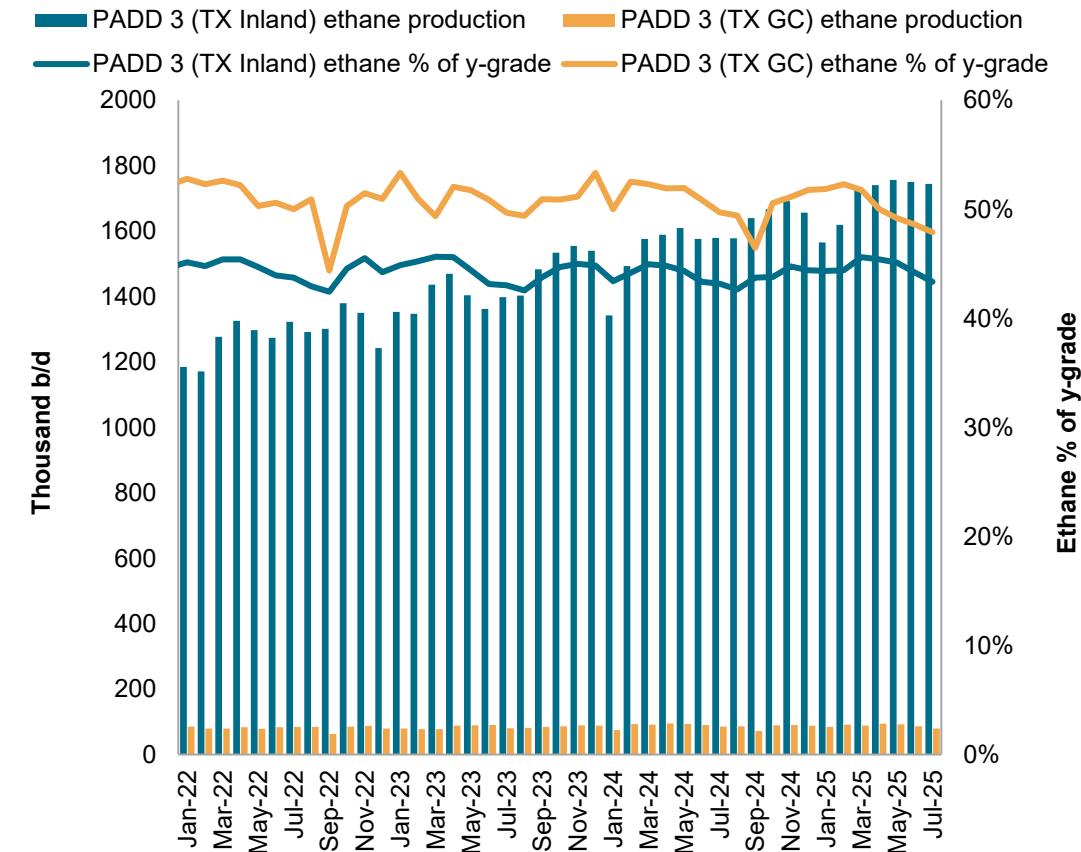
Sources: S&P Global Commodity Insights, EIA.

Strong Permian frac spreads have sustained consistently high ethane production in Texas Inland, with little fluctuation

Ethane production and frac spread relationship



Ethane production vs ethane % of y-grade

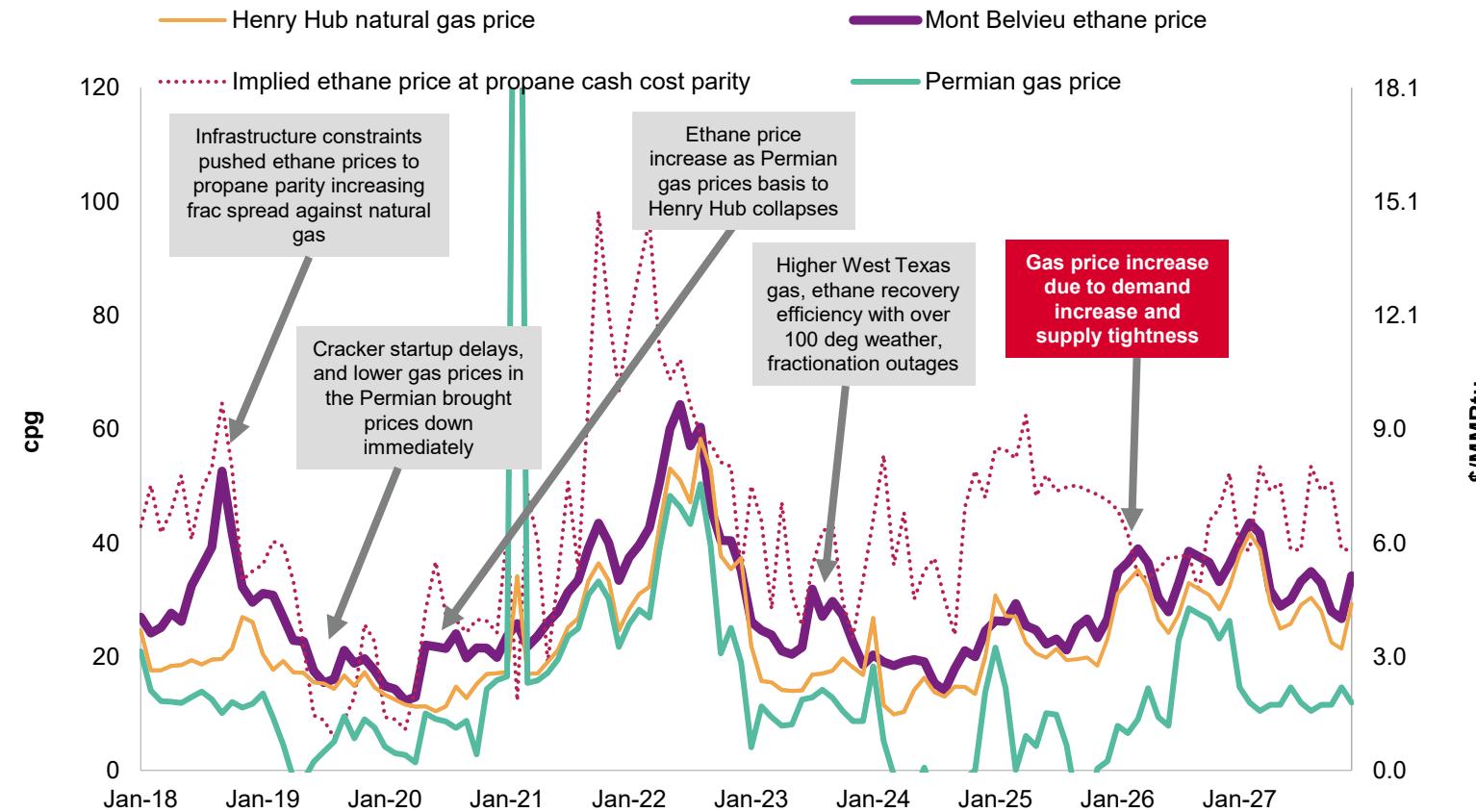


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights, EIA.

Ethane prices firm with higher gas values (2026-27); Permian frac spreads to narrow before re-widening

Ethane price in relation to natural gas and propane



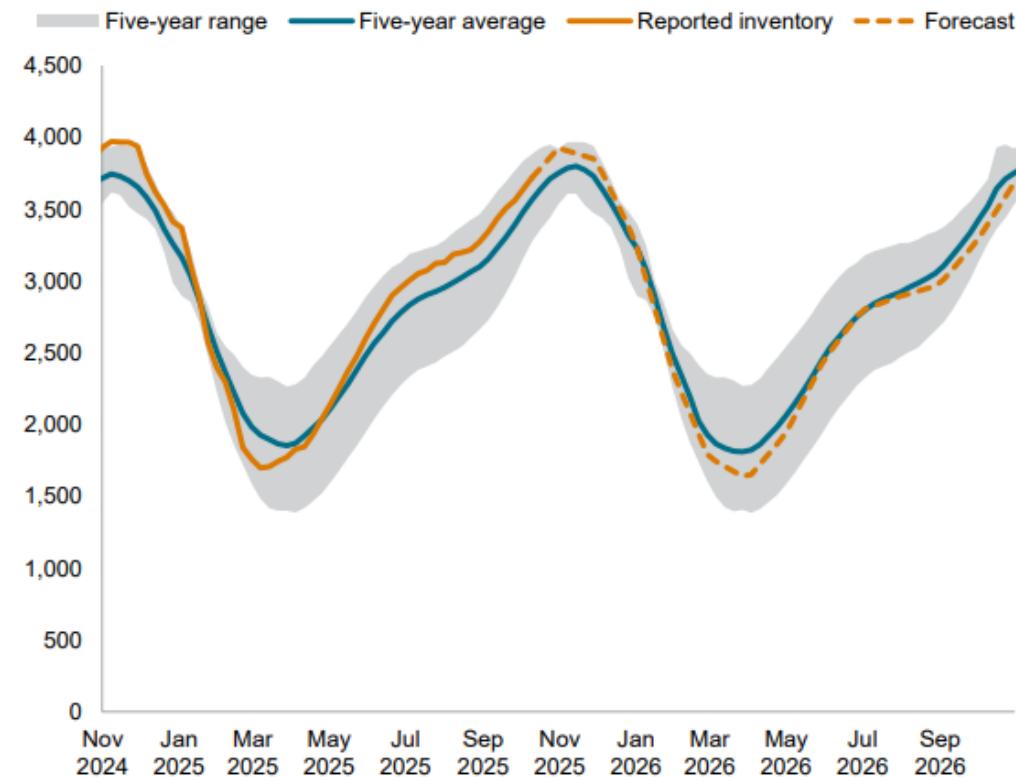
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

- Ethane prices firm slightly**: With natural gas prices showing only a slight uptick in October compared with September, ethane prices edged higher to 27 cpg, up from 26 cpg in September. The frac spread to Henry Hub widened to 7 cpg, up from 6 cpg the previous month. In the Permian Basin, the frac spread remained elevated at around 34 cpg, supported by very low regional gas prices resulting from tight natural gas takeaway capacity.
- Permian frac spreads to narrow with new takeaway capacity, then widen again as gas output climbs**. We expect the Permian frac spread to decrease in the second half of 2026 as new pipeline capacity helps relieve existing constraints. The spread relative to Waha gas is projected to decline to around 10–12 cpg—sufficient to encourage ethane recovery during that period. However, as gas production rises further, takeaway constraints are likely to re-emerge, widening the spread relative to Waha while maintaining about 3–5 cpg over Henry Hub to support ethane recovery in other regions as well.
- Henry Hub is expected to average \$4.60/MMBtu in 2026 and \$4.52/MMBtu in 2027. Ethane prices are expected to track natural gas prices, as natural gas sets the floor for ethane values. **Ethane prices are projected to average 24 cpg, 33 cpg and 39 cpg in 2025, 2026 and 2027 respectively.**

US Lower 48 Natural Gas inventories projected to reach 3.93 Tcf, surpassing historical averages

US Lower 48 storage inventory (Bcf)



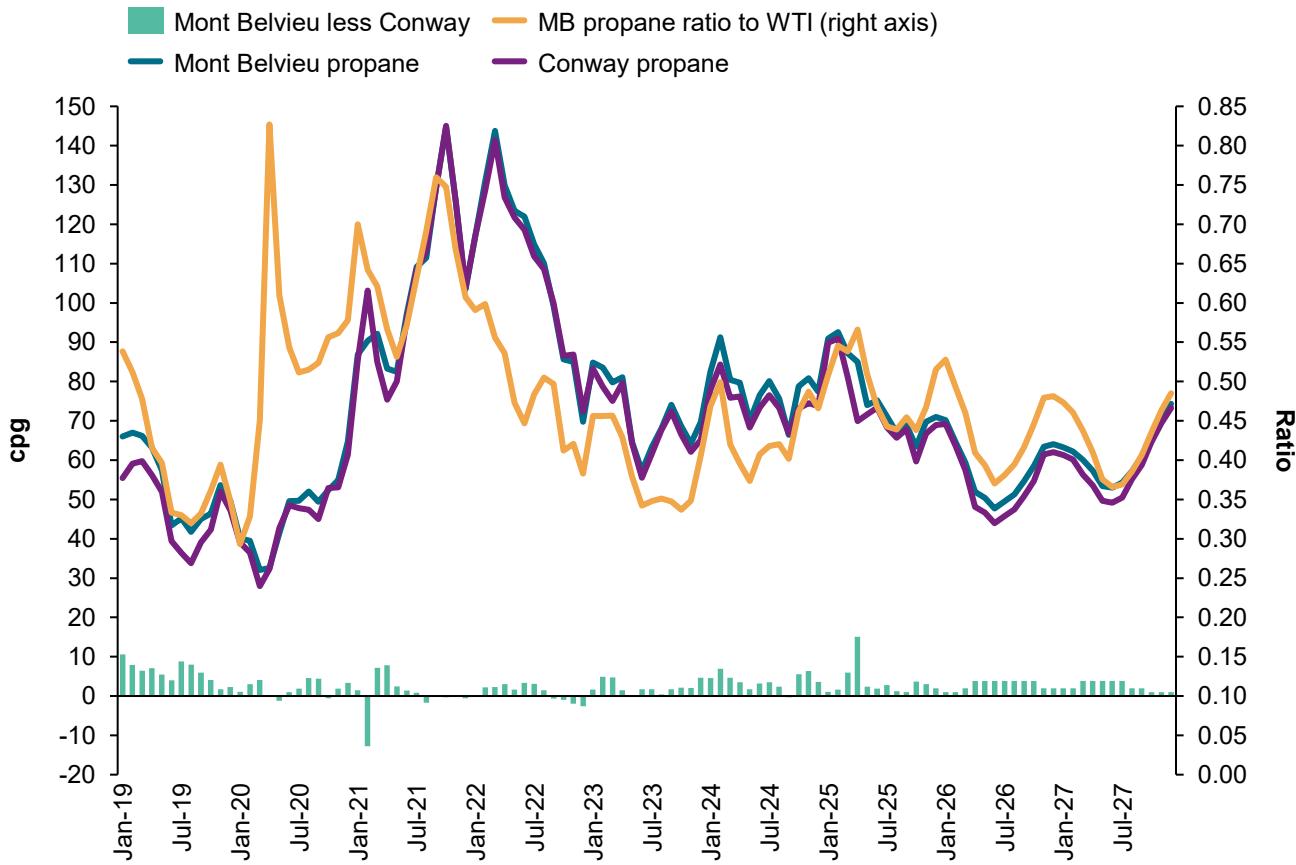
- End-October US Lower 48 inventories look to top out around 3.93 Tcf, 177 Bcf above the lagging five-year average, 21 Bcf higher than October 2024 and the highest for the month since 2016. Inventories stood at 3.81 Tcf on Oct. 17, and despite the reductions in Northeast and Permian output month over month and record LNG feedgas levels, the seasonal decline in end-use loads and recent modest supply recovery still allow for substantial injections through the end of October.

Data compiled October 21, 2025.

Sources: S&P Global Commodity Insights.

Mont Belvieu propane prices have been lowered amid rising supply and the need to clear barrels

Propane price and ratio to WTI



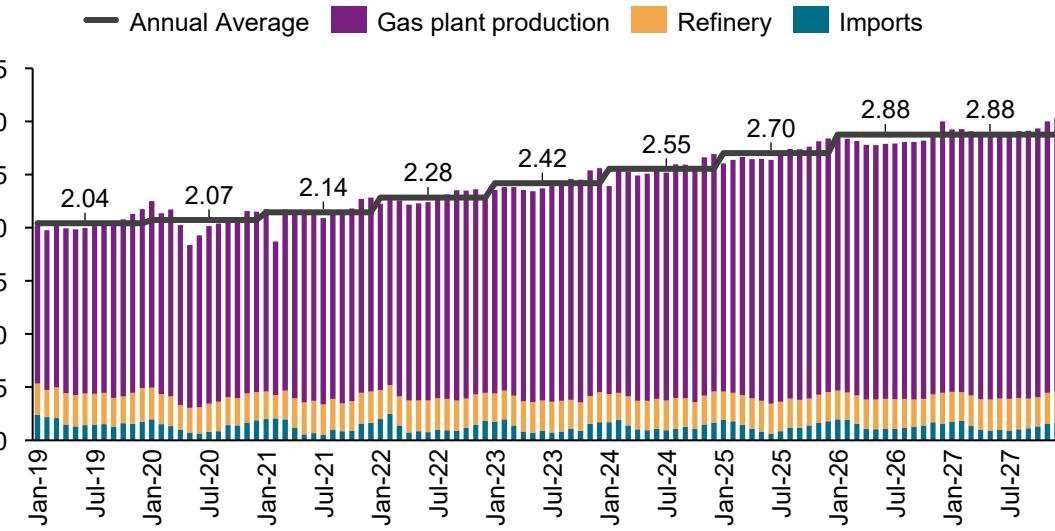
- **Propane prices fell by 6 cents per gallon in October, averaging 63 cpg.** On a percentage-of-WTI basis, propane weakened to 44%. Inventories swelled to more than 103 million barrels—over 10 million barrels above the five-year average and slightly higher than last year—supported by robust production. The Mont Belvieu propane-to-crude ratio may strengthen as winter heating demand sets in. However, with supply underpinned by a high gas-to-oil ratio (GOR), propane is expected to remain weak relative to previous winters. Globally, propane supply remains ample, and prices continue to lag naphtha—the main competing petrochemical feedstock. Saudi CP prices have declined over the past two months, reflecting robust supply, weak global petrochemical demand and the desire to defend market share. Additional uncertainty surrounding USTR implementation and port fees has further dampened demand expectations.
- **Propane inventories surpass 103 million barrels as the inventory build season is extended.** This increase is primarily due to robust production and lower than expected exports. Exports were affected by cargo cancellations, cargo lifting deferments to a later date via private negotiations and weak arbs. Propane as a percentage to WTI is expected to average 48% in the coming winter (Nov to March). However, a colder-than-normal winter could tighten market balances. The outlook **assumes no supply disruptions** related to potential winter freeze events.
- **In October, the Conway propane discount to Mont Belvieu increased to 4 cpg from 1 cpg in September.** The wider discount implies sufficient inventory levels in the mid-con region ahead of the winter season. Excess barrels are moved to USGC for exports. We expect Conway propane prices to strengthen as crop drying demand and winter heating demand in the midcontinent increases in the coming months.

Data compiled October 31, 2025.

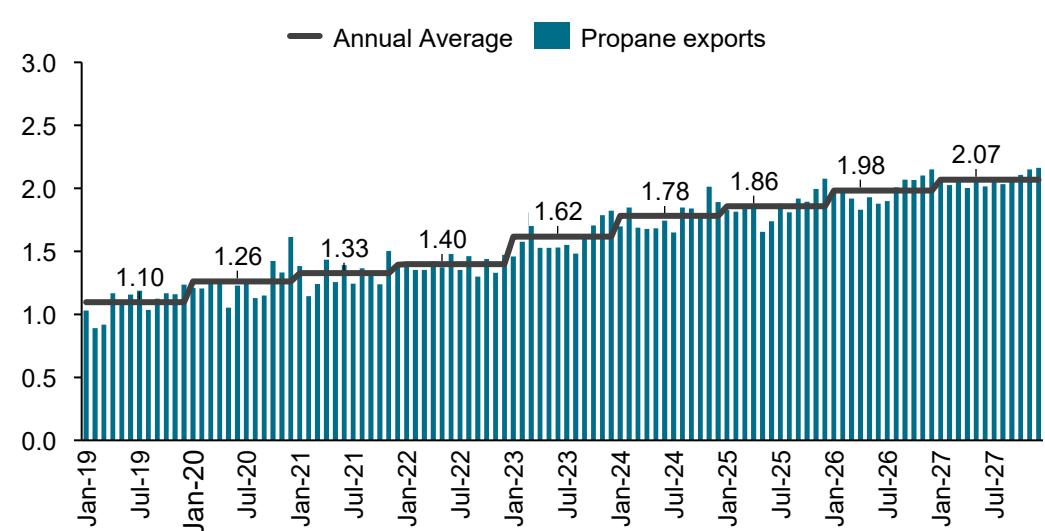
Sources: S&P Global Commodity Insights.

With new export capacity additions and higher GOR, propane exports are expected to increase to over 2 million b/d in 2027

US propane supply (MMb/d)



US propane exports (MMb/d)



- Propane production from gas processing is projected to increase by 4.4% in 2025–27.** While this marks a slower pace compared to the 7% annual growth recorded from 2022 to 2024, supply is still expected to rise. The growth rate is revised higher from 3.2% we had in our previous report. The increase in growth rate is because of more associated gas being produced owing to upward revision in Permian basin's gas-to-oil ratio. Additionally, fractionation capacity would support the increase in supply; in particular, the Gulf Coast is set to see its fractionation capacity expand by more than 500 mb/d during 2025–26, which will help drive further supply growth
- Exports are expected to increase.** With new export capacity additions and higher GOR, we expect exports to average 1.86 million b/d in 2025, 1.98 million b/d in 2026 increasing to 2.1 million b/d by 2027 (the previous outlook: 1.84 million b/d in 2025, 1.91 million b/d in 2026, 1.96 million b/d in 2027). Global propane demand is expected to increase 4% (~365 mb/d) in 2027 compared to 2025.

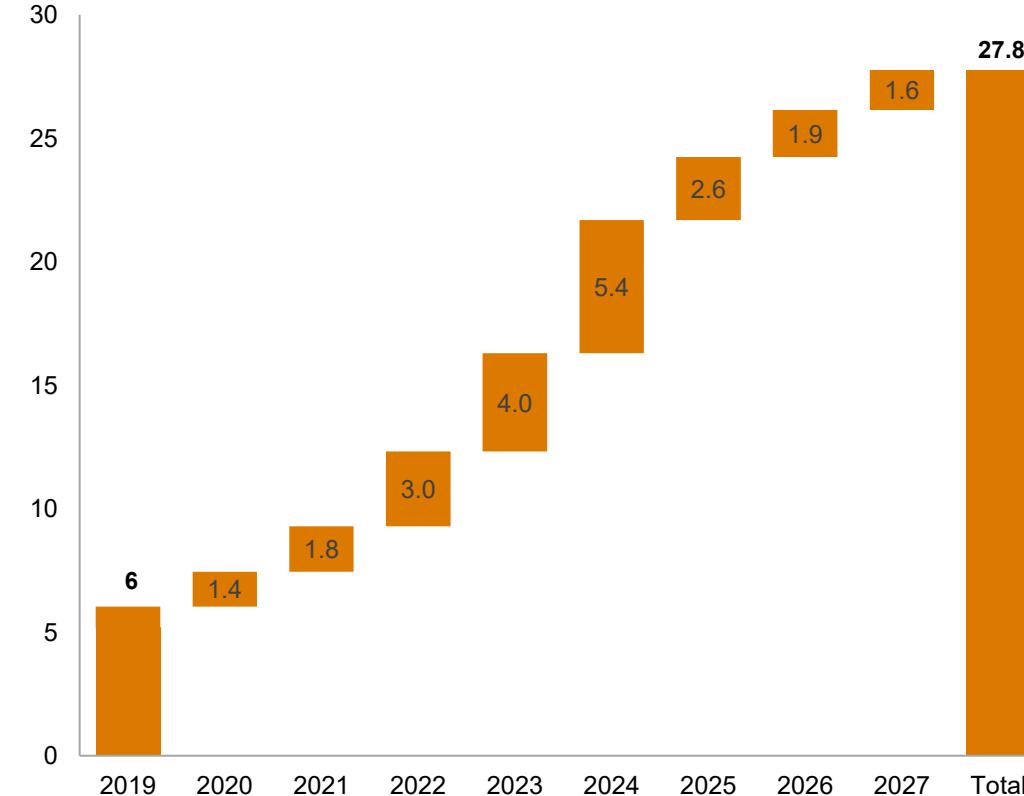
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights; US Energy Information Administration.

In the next two years, additional new PDH units are expected to become operational in mainland China

The new PDH units will mainly rely on the propane imports from the overseas suppliers

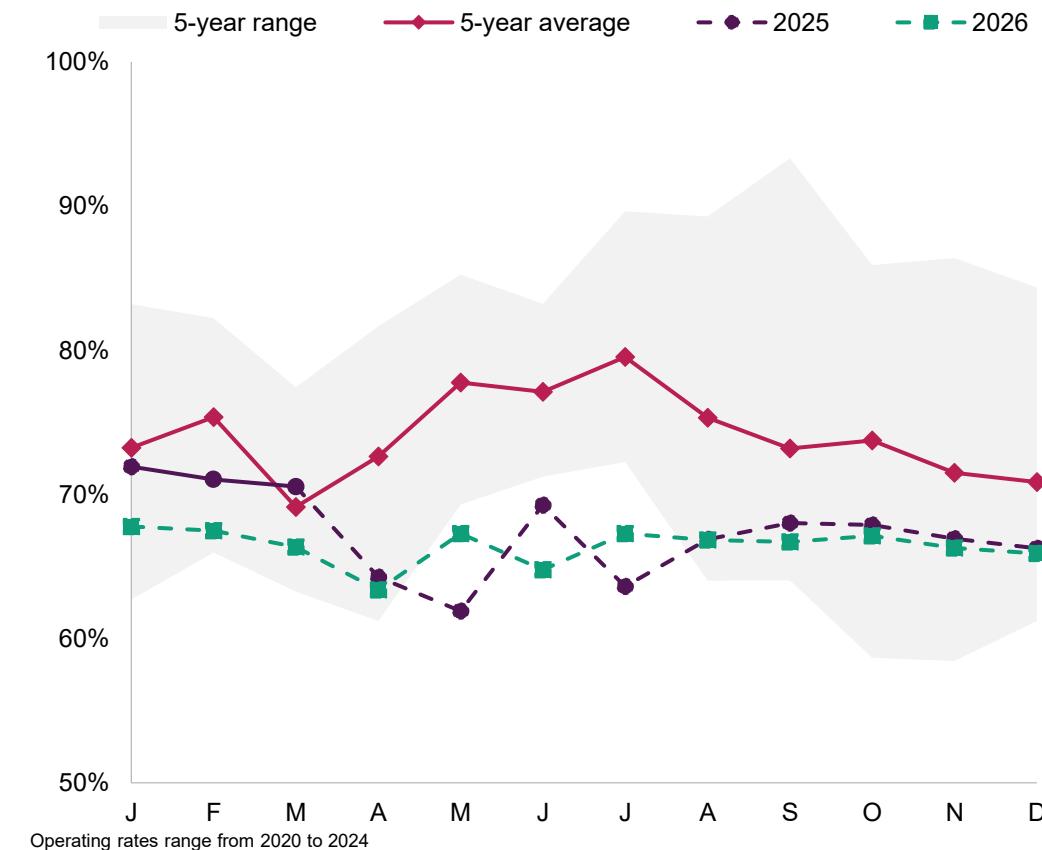
PDH capacity of mainland China: year-over-year growth (million metric tons per year)



Data compiled September, 2025

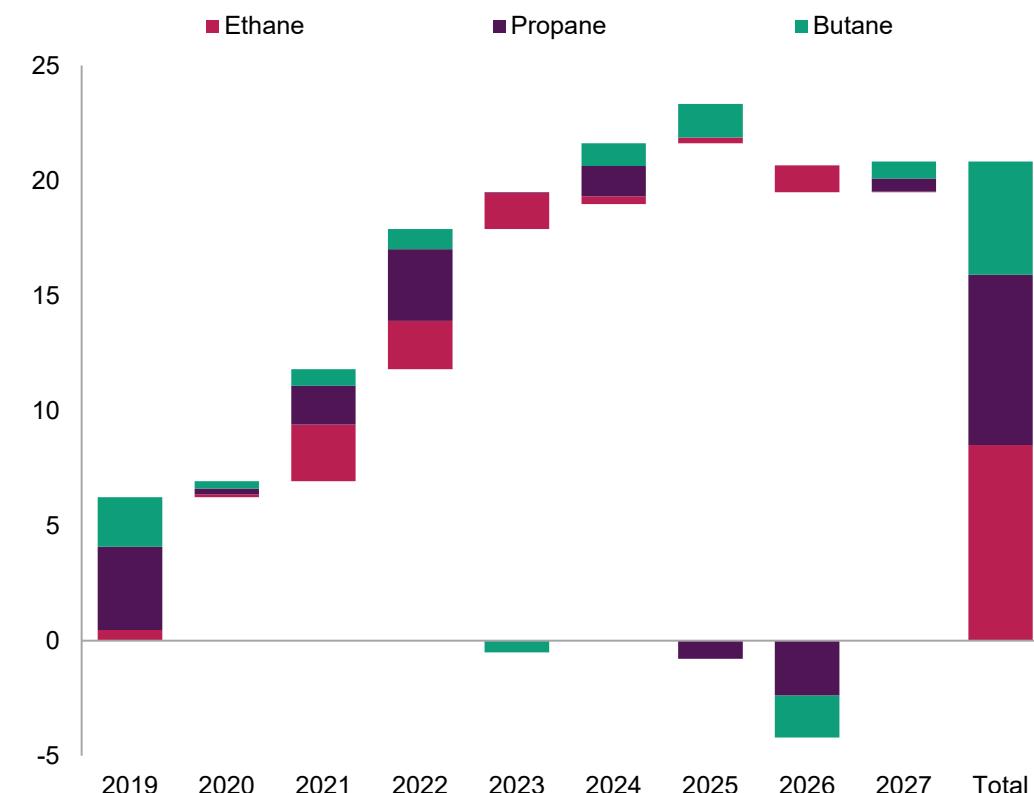
Source: S&P Global Commodity Insights.

Run rates of PDH units in mainland China



Global ethylene run rates and year-over-year growth of NGL demands for steam cracking of mainland China

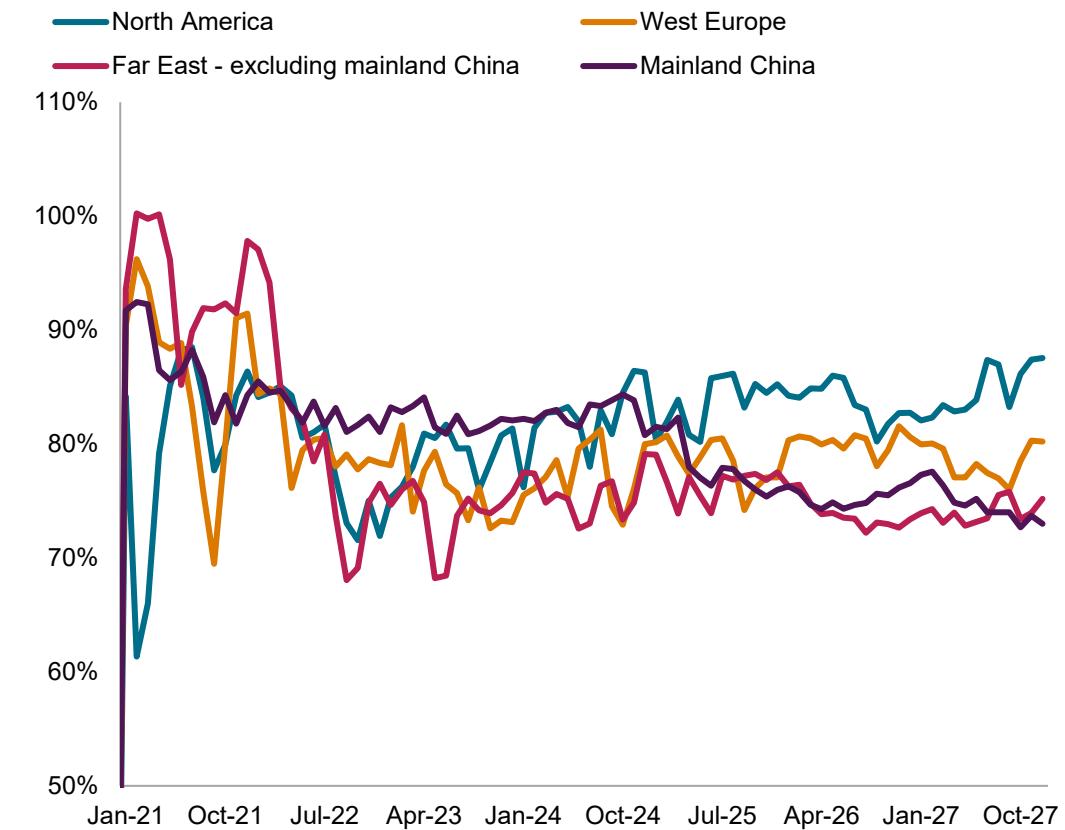
Year-over-year growth of NGL demands for steam cracking of mainland China (million metric tons)



Data compiled October, 2025

Source: S&P Global Commodity Insights.

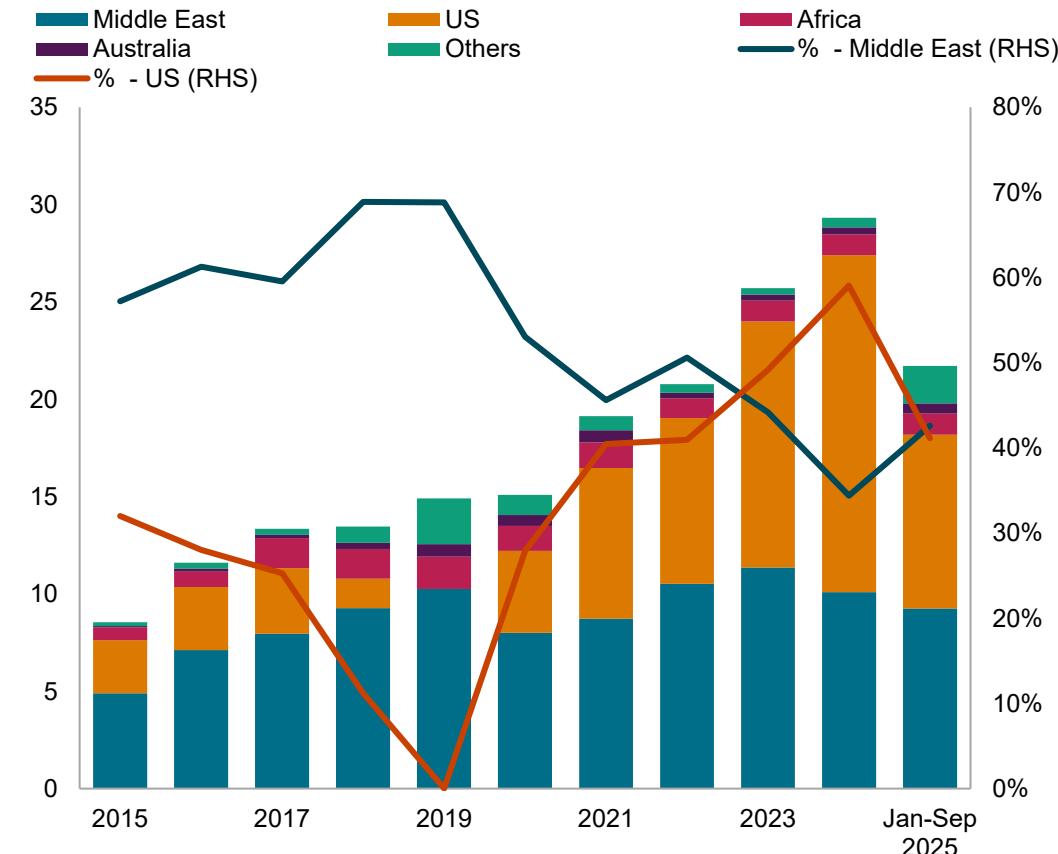
Run rates of global ethylene plants



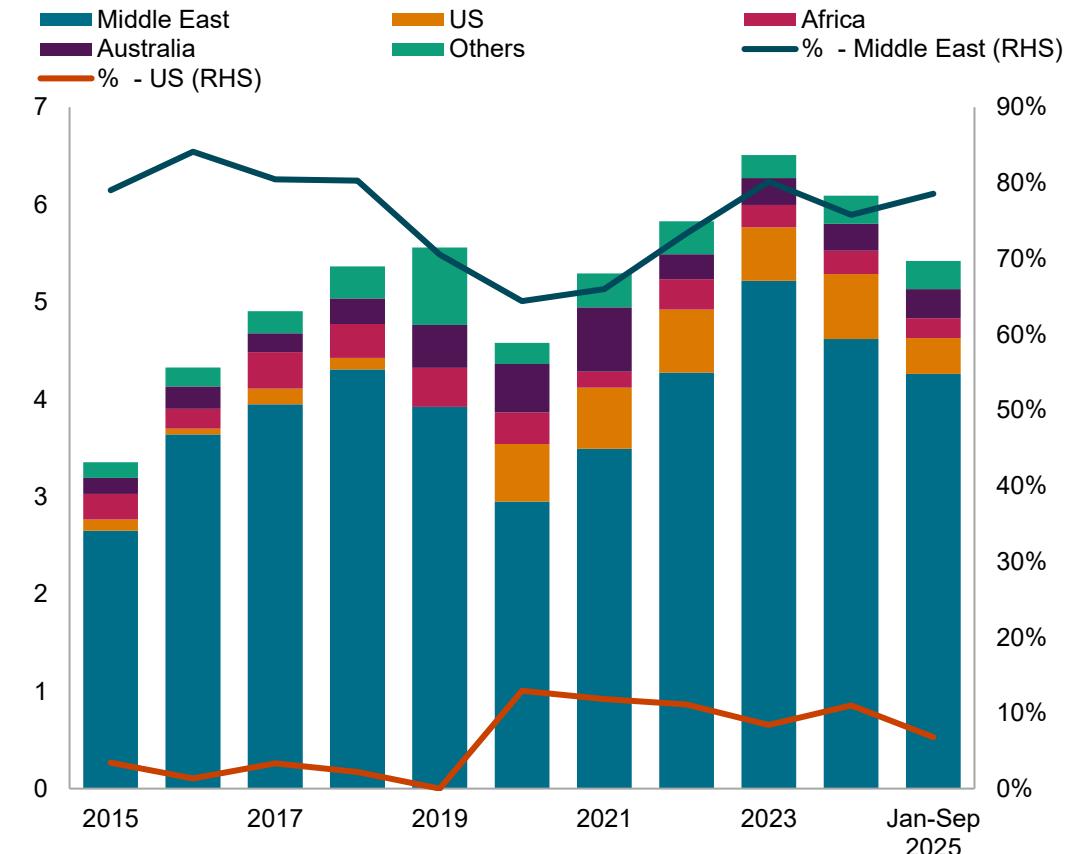
Trade flow: mainland China LPG imports by source

The United States is becoming the main supplier of propane, while Middle East continues to dominate the butane imports to the country

Propane imports to mainland China by source (Million metric tons)



Butane imports to mainland China by source (Million metric tons)

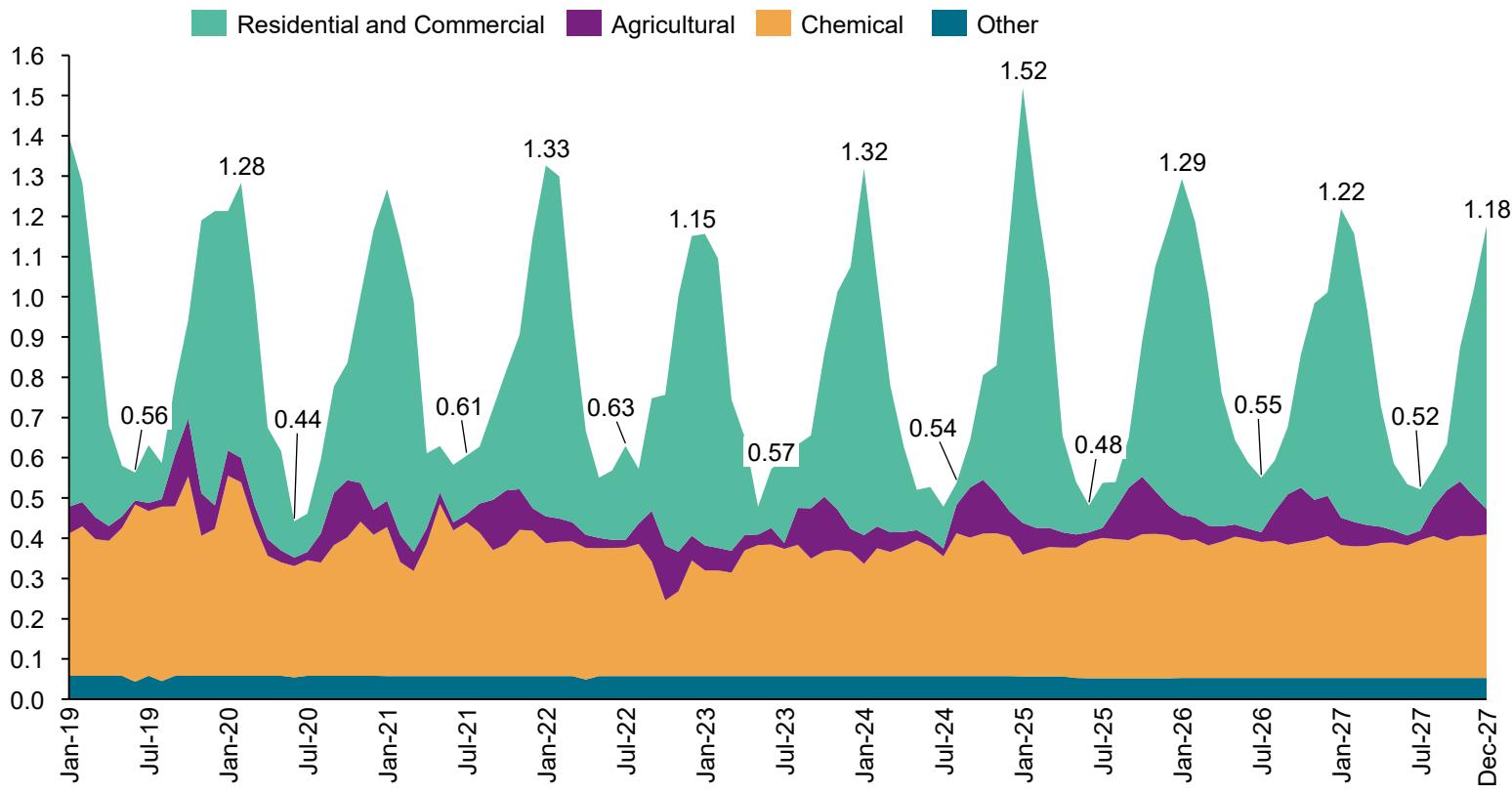


Data compiled October, 2025

Source: S&P Global Commodity Insights.

Domestic demand is expected to rise as the crop drying season peaks

US propane domestic demand (MMb/d)



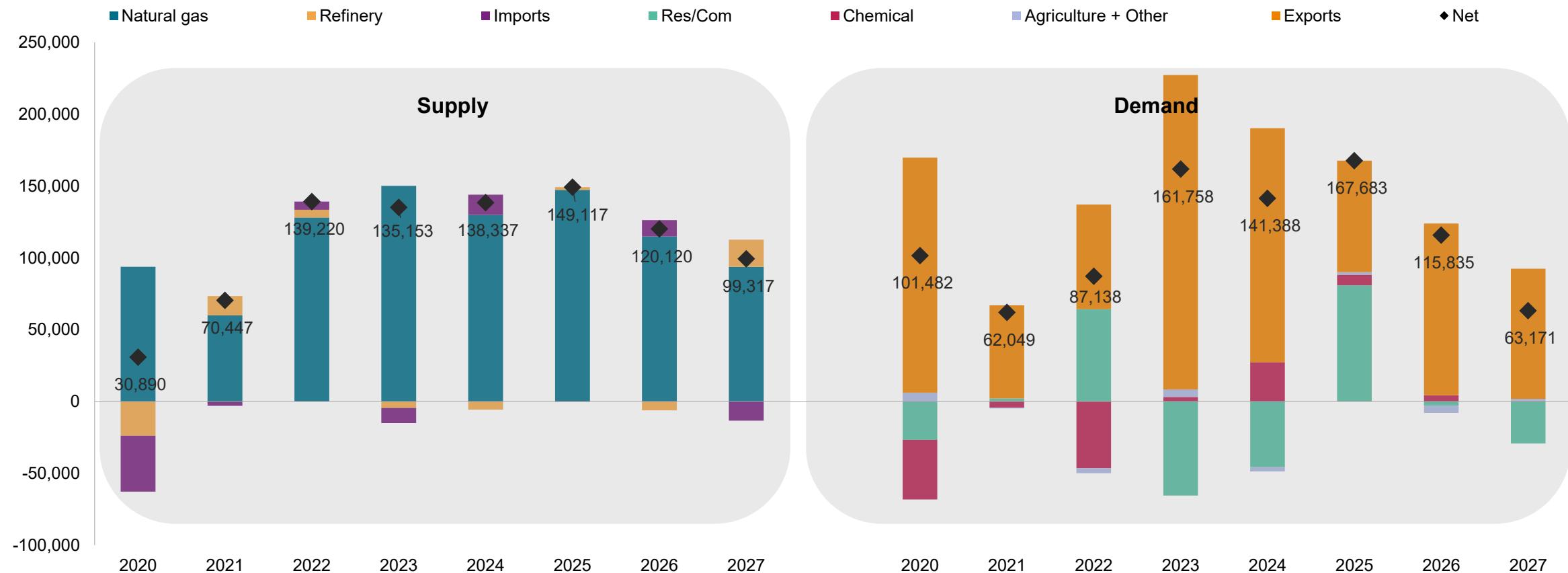
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

- For the U.S. Corn Belt, crop-drying demand typically peaks from mid-October through late November. The demand appears **moderately supportive** rather than strongly bullish. It is getting a boost from the large crop volume. However, because many areas are not excessively wet and because harvest is advanced in many states, **the upside may be limited**. Regions with average or below-average moisture will need less intense drying. Crop-drying demand is expected to be lower than the previous year because of the hot weather in late September and October, which lowered the crop moisture level. Entering this season, propane inventories are strong and well above the five-year average, with Midwest stocks—where drying demand is concentrated—higher than 5-year average. This **healthy inventory position reduces the risk** of localized supply shortages or sharp price spikes.
- In our outlook, the average propane-to-West Texas Intermediate (WTI) price ratio for October 2025 to March 2026 is projected at 48%, slightly below last winter's 50%. This projection reflects a balance between supply and demand dynamics, as strong supply cushions and GOR-driven production growth limit upside pricing risks, even amid potential cold snaps.

Higher supply growth in 2026–2027 compared with the previous outlook will result in increased U.S. exports needed to balance the market

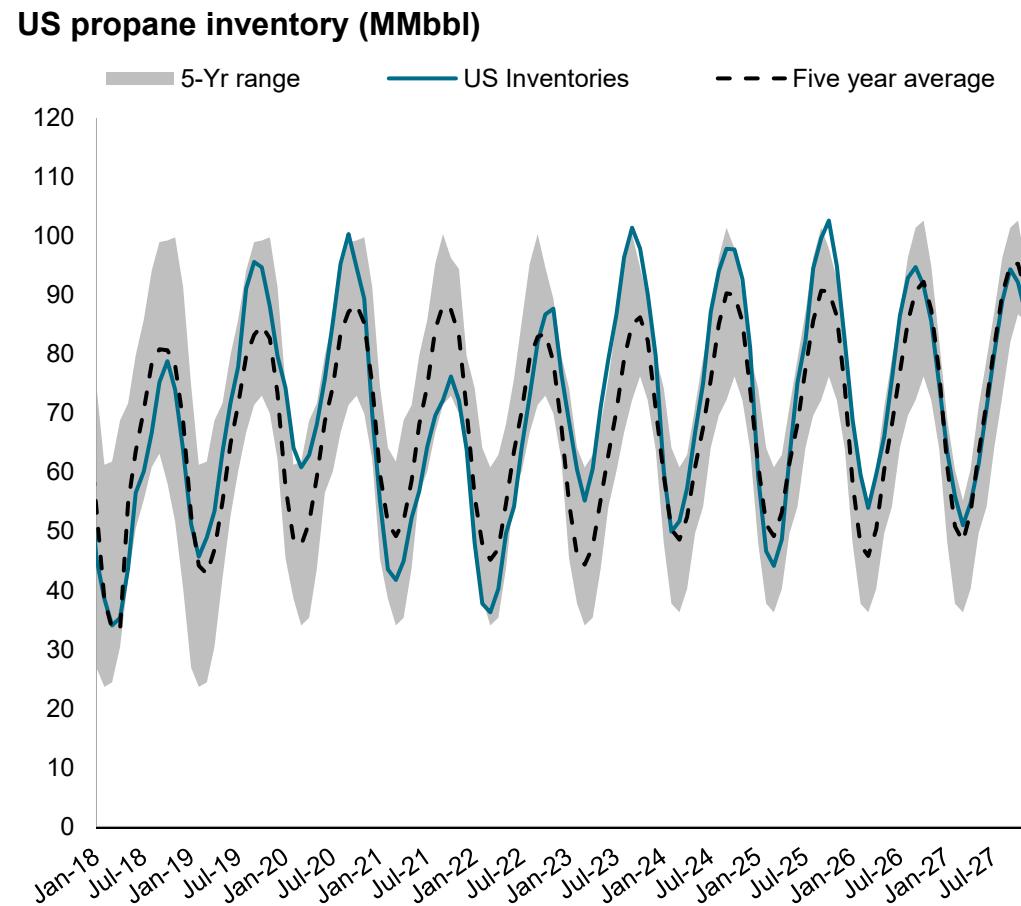
US propane supply and demand year-over-year changes (b/d)



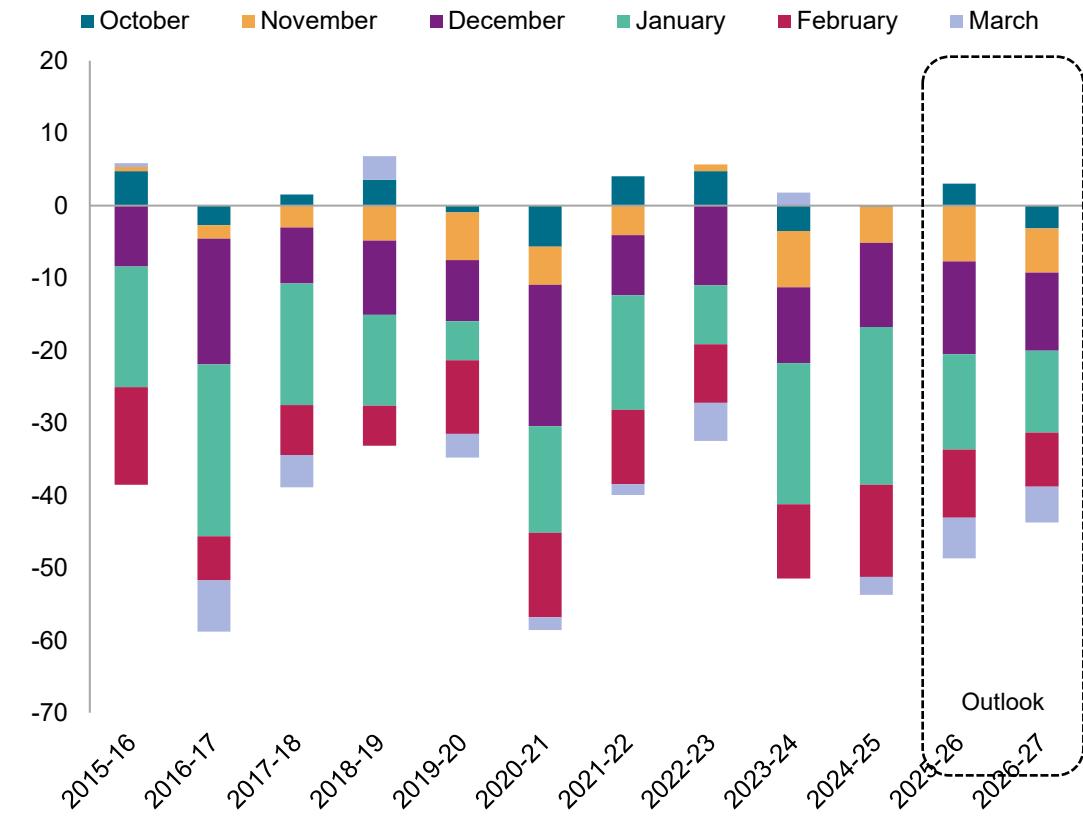
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Seasonal propane inventories are projected to reach a peak of around 103 million barrels and stay above the five-year average, underpinned by strong domestic production



Propane inventory change during winter season, October through March (MMbbl)

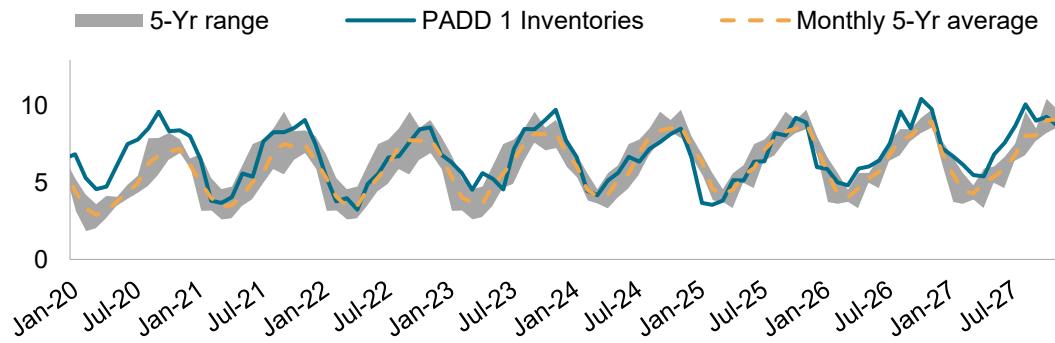


Data compiled October 31, 2025.

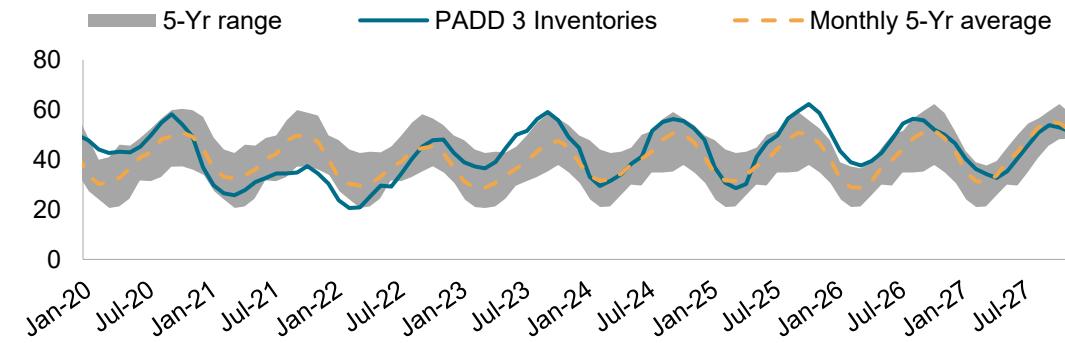
Source: S&P Global Commodity Insights.

Propane inventory is expected to stay ample on robust production

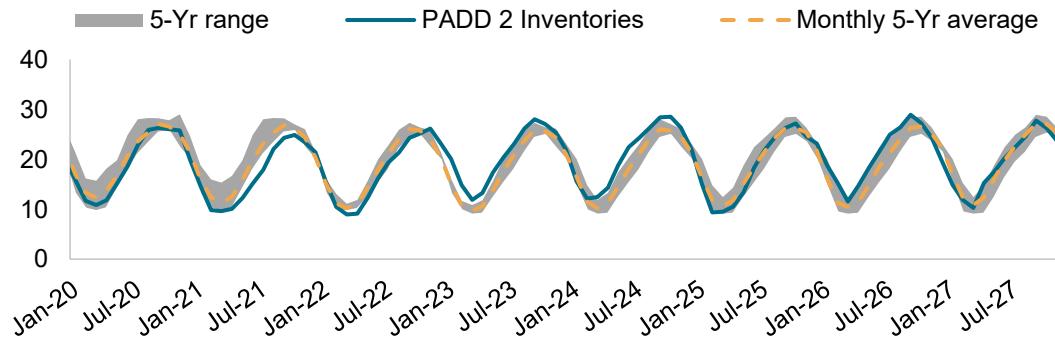
PADD 1 propane inventories (MMbbl)



PADD 3 propane inventories (MMbbl)



PADD 2 propane inventories (MMbbl)



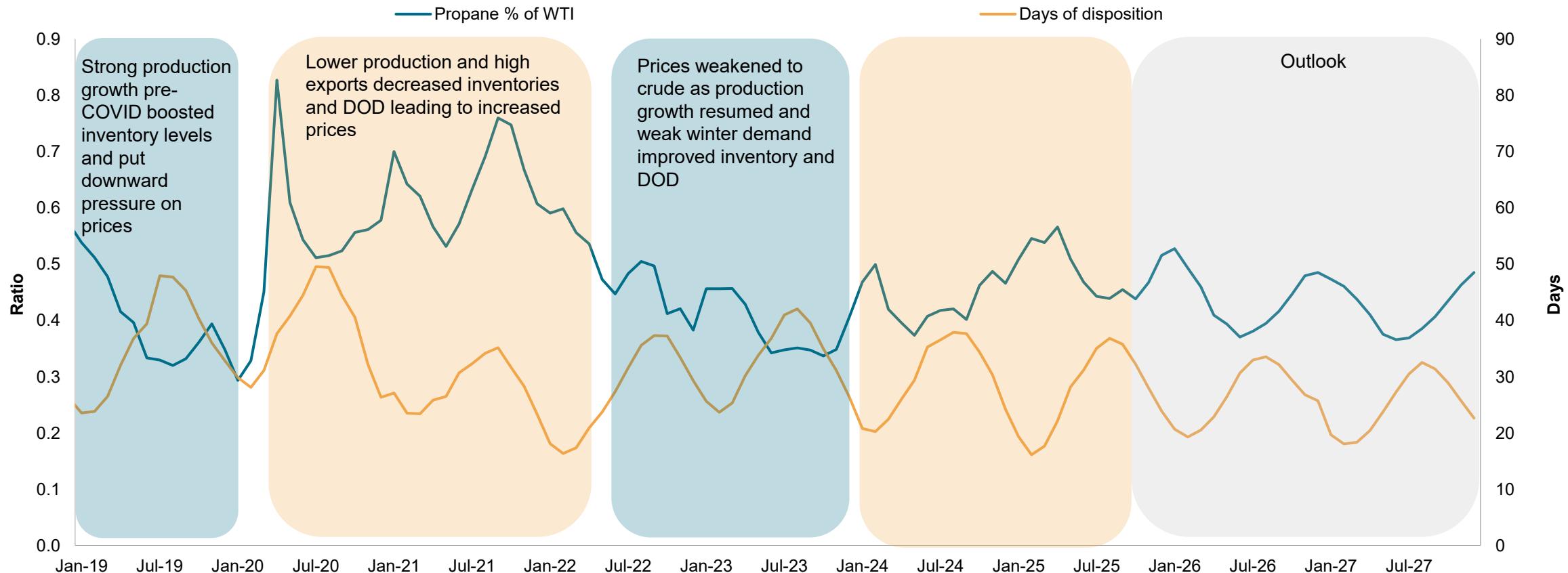
- Total demand will rise as new export capacities come online in US Gulf coast. However, propane supply growth is projected to slow in 2026 & 2027, with year-on-year growth at about 2.5%. Terminal expansions will boost US export capacity, and domestic chemical demand for propane is also set to increase, as strong ethane prices—supported by high natural gas prices—make propane a more attractive feedstock

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Extended days of disposition, driven by higher supply, weigh on the propane-to-WTI ratio in 2026–27

Propane ratio to WTI against days of disposition

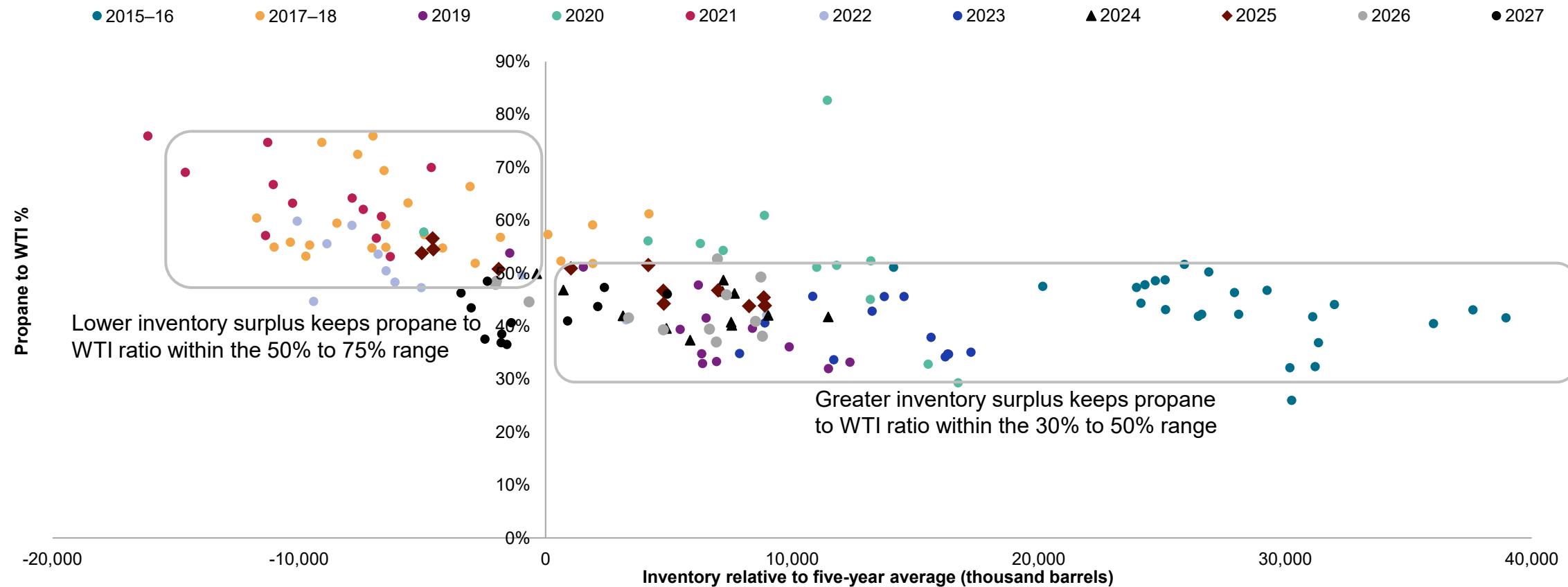


Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Inventory levels above the five-year average will decrease propane-to-WTI ratio below 50% through 2026-27

Mont Belvieu propane-to-WTI oil price ratio relative to 5-year rolling inventory

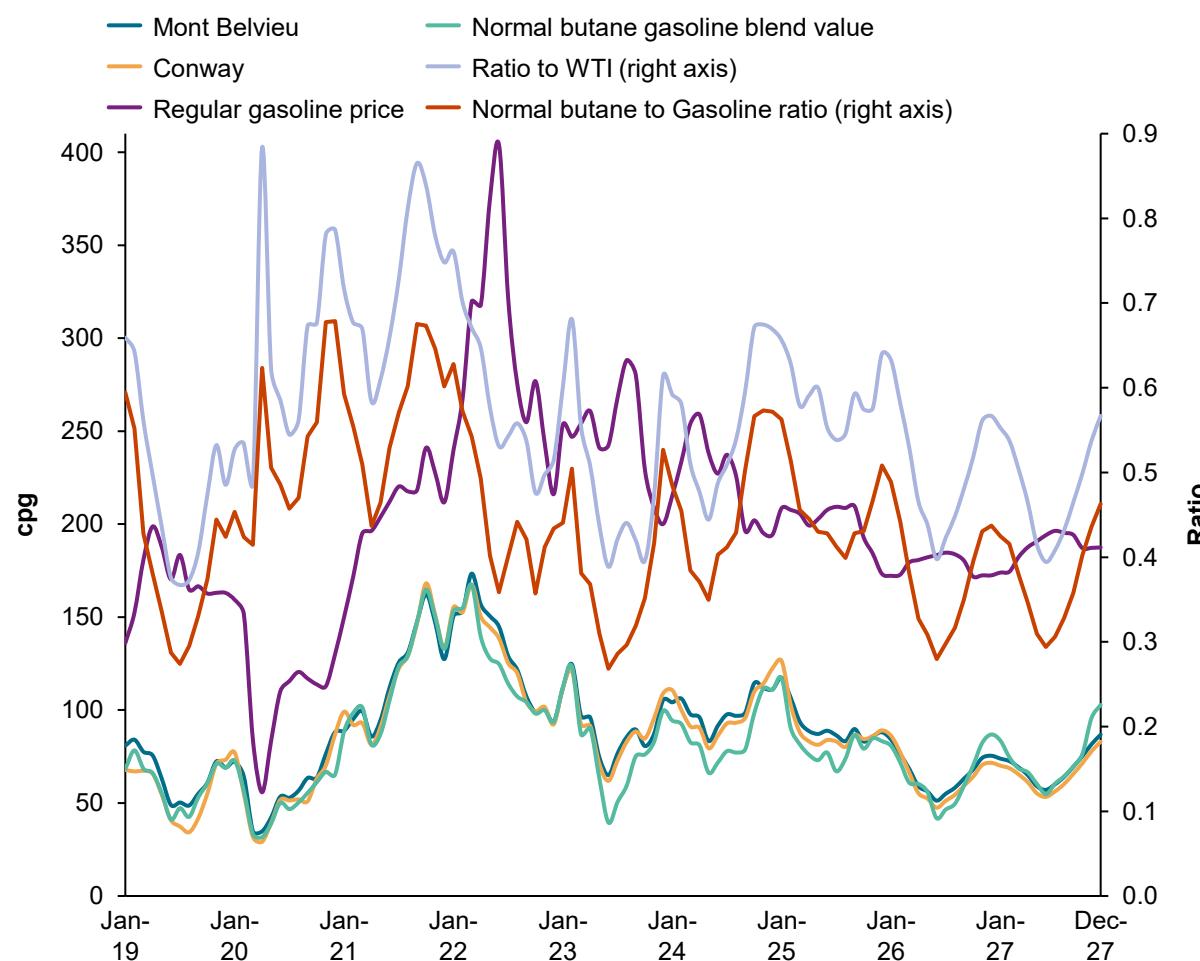


Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

October butane prices slide on lower crude and Saudi CP cuts

Normal butane prices, ratio, and blend value



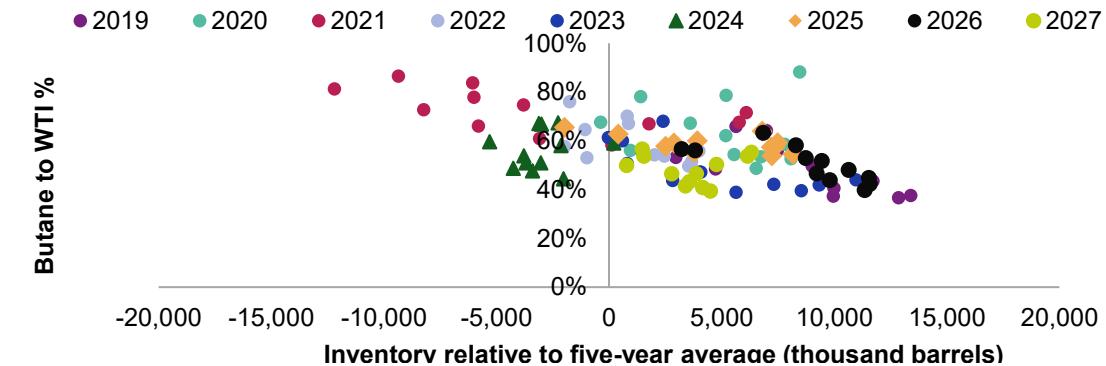
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

S&P Global

Commodity Insights

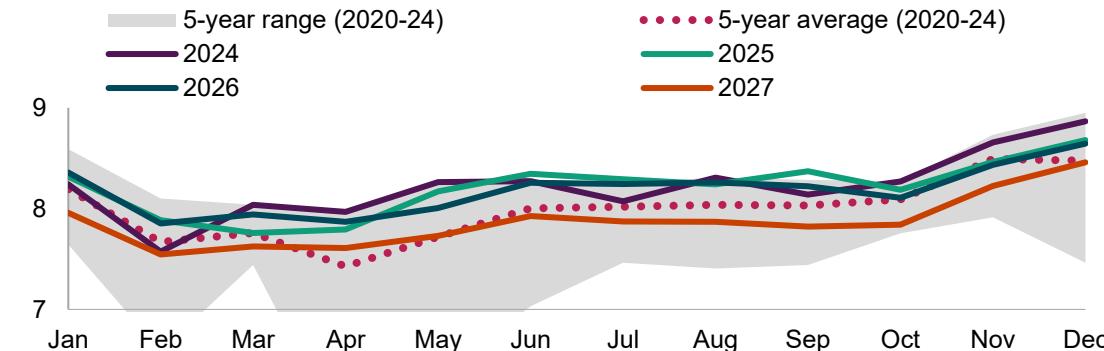
Mont Belvieu butane-to-WTI oil price ratio relative to 5-year rolling



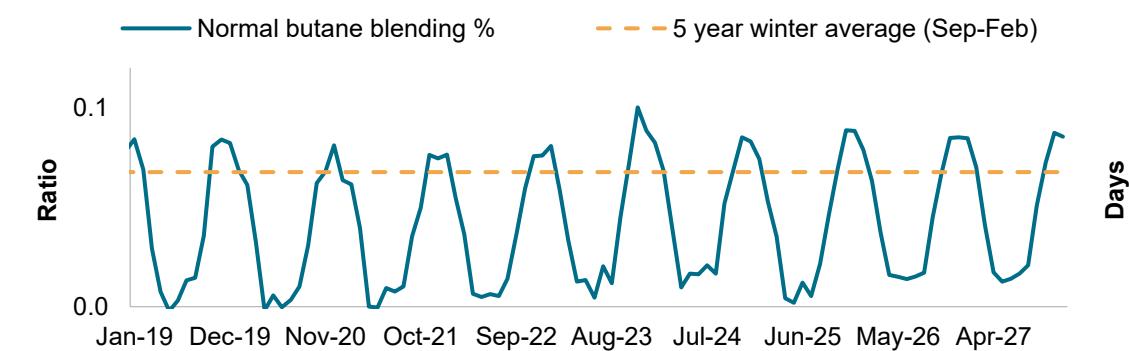
- In October, Mont Belvieu normal butane prices slid to 83 cpg, a notable drop from 90 cpg in September. This decline was driven not only by weaker crude prices but was amplified by a significant reduction in Saudi Arabia's LPG contract price (CP)—now at its lowest level since August 2023. The CP cut reflects increasing bearishness in the global LPG market and has intensified competitive pressure from international suppliers. Mont Belvieu prices responded swiftly; butane values fell from 93 cpg at the end of September to 84.5 cpg in early October. Concurrently, the butane-to-crude ratio eased to 57% in October, down from 59% the previous month. Even with seasonal support from winter gasoline blending demand, the upside for US butane remains constrained as export logistics and freight costs continue to reshape trade economics.
- The butane-to-WTI ratio is projected to remain within the 55–59% range through the winter of 2025–26, with potential short-term spikes during peak refinery drawdowns. Despite this, fundamentally bearish signals persist across the butane landscape. The pressure is on US butane exports to provide support, as domestic fundamentals offer limited relief.

Normal butane blending to stay near average in 2025-26 winter

US gasoline production (MMb/d)



US Normal butane blending % in gasoline production



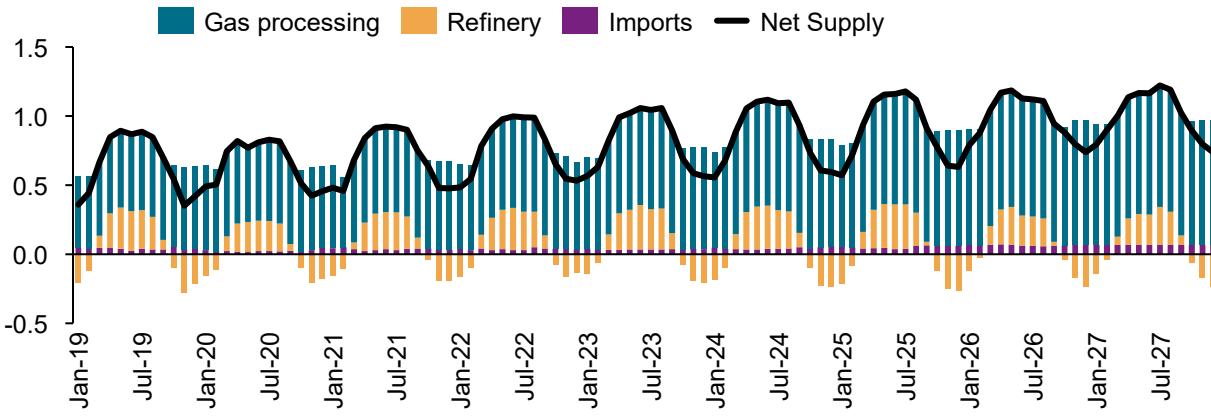
- The analysis of US gasoline demand indicates a complex interplay of factors. On one hand, declining work-from-home rates, which have reached their lowest since May 2020, are expected to increase commuting miles. However, this is countered by a stagnant employment outlook and steady efficiency gains in vehicles. Despite total vehicle miles traveled (VMT) projected to exceed pre-pandemic levels by 2026 due to lower gasoline prices and a gradual return to office work, US gasoline demand is anticipated to remain 4% below 2019 levels.
- In 2027, a recovery in retail gasoline prices, combined with weaker economic growth, is likely to limit the growth of VMT per capita, resulting in the lowest annual VMT growth rate since 2020. Additionally, low net international migration projections will further suppress demand. On-road fleet efficiency is expected to improve steadily in 2026 and 2027, and with VMT growth stalling, gasoline demand is projected to decline by 1% year-over-year in 2027.
- Normal butane blending demand is expected to remain close to average for the 2025–26 winter, with the typical winter blending level around 7%. However, if market conditions mirror those of 2023–24—where strong associated gas production in shale plays and heavy stock builds made butane abundantly available—blending demand could surge again, especially since limited butane price upside persists and inventories remain high, making further upside possible if supply fundamentals align.

Data compiled October 31, 2025.

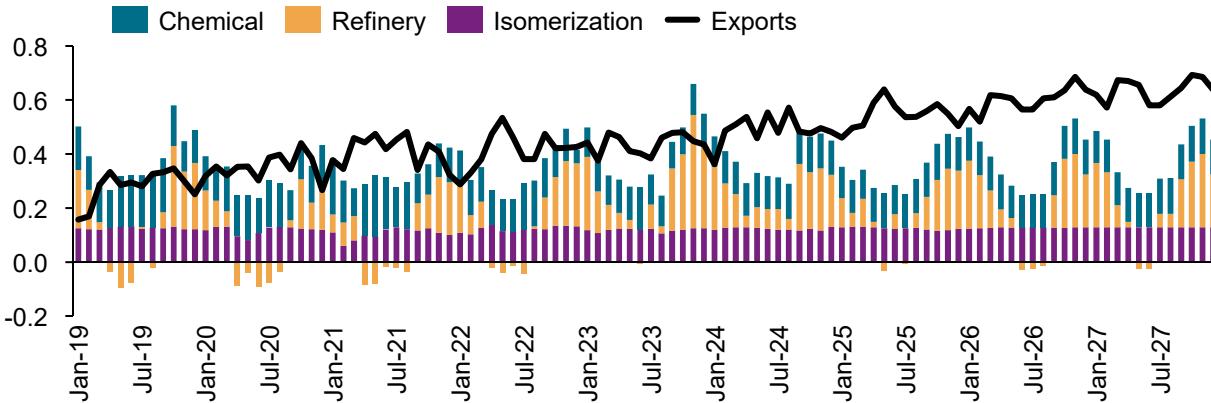
Sources: S&P Global Commodity Insights.

US butane inventories climb to multi-year high in July

US normal butane supply (MMb/d)



US normal butane demand (MMb/d)

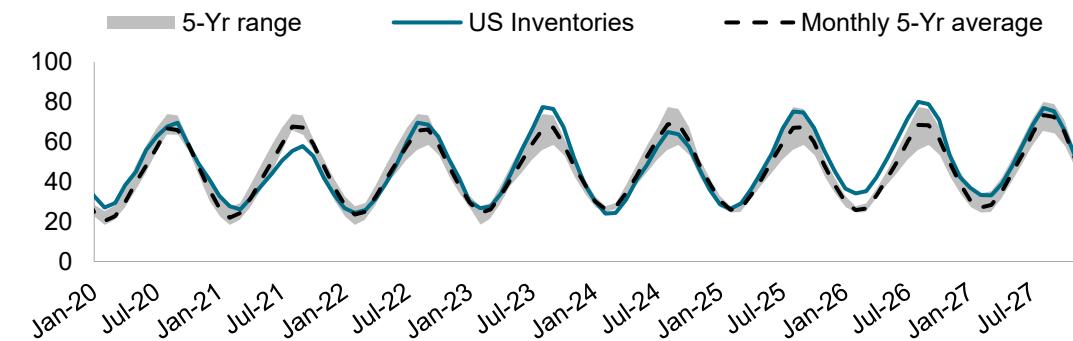


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights; US Energy Information Administration.

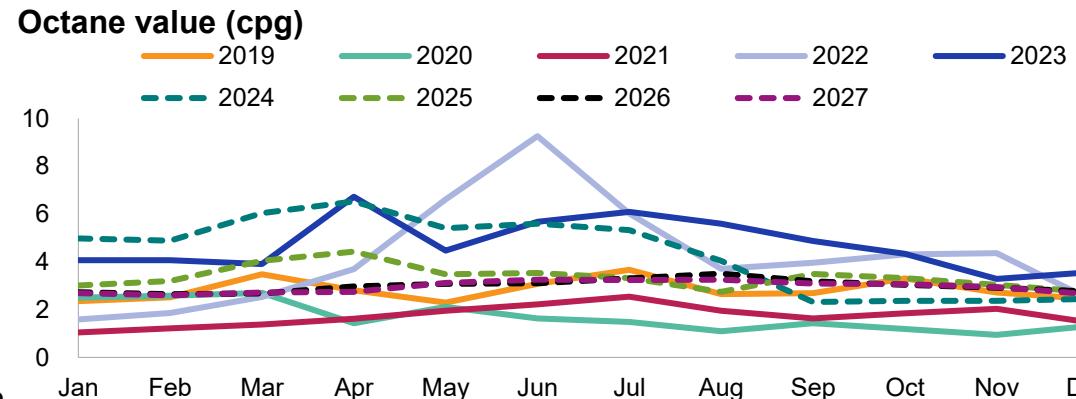
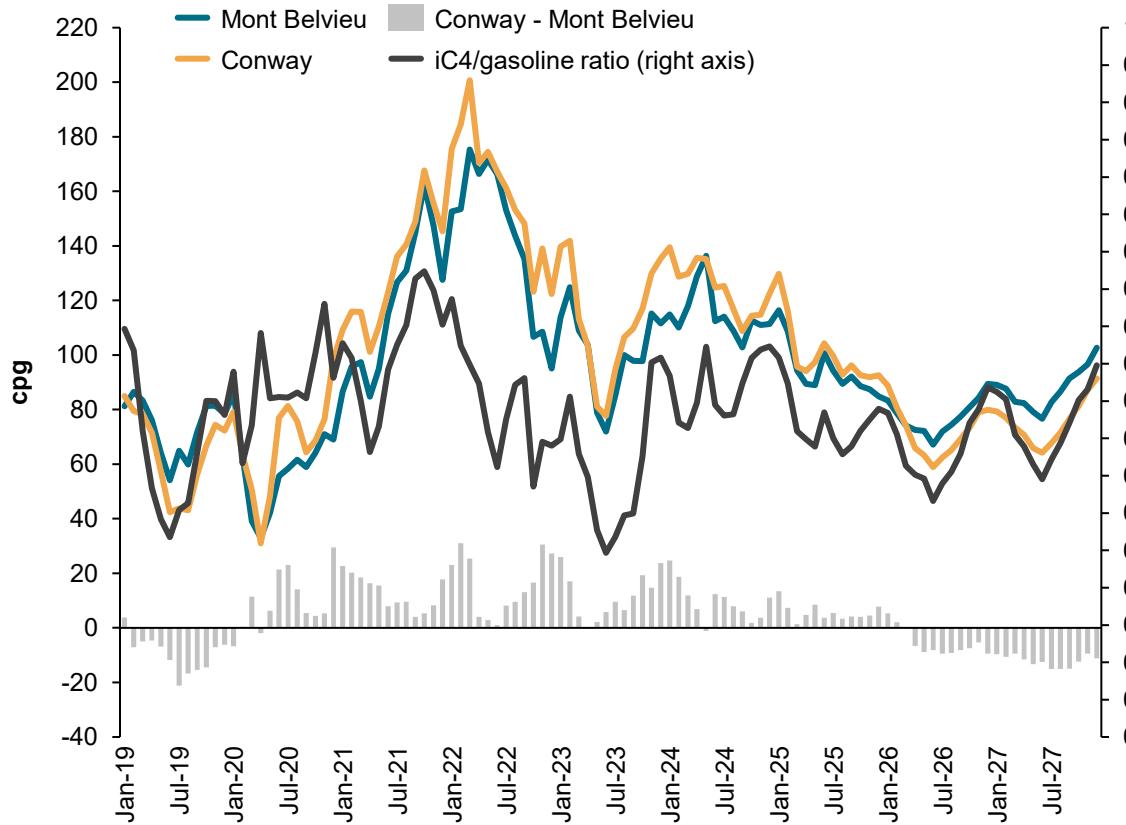
- According to EIA data, US normal butane inventories rose to 67 million barrels in July 2025, approximately 7 million barrels above the five-year average and 9 million barrels higher than July 2024, which recorded 58 million barrels. This inventory build was driven by strong associated gas production supported by increased gas-to-oil ratios (GOR), which pushed overall NGL supply higher, outweighing the rise in butane exports seen in early summer.
- Butane exports decreased to 535,000 b/d in July, slightly down from June's volumes but still above first-quarter 2025 levels, with August exports expected to remain steady based on Commodity At Sea (CAS) data. Southeast Asia continues to demonstrate stable demand, particularly from Japan and South Korea.
- Following the official RVP switch, stock builds have slowed, consistent with natural gas plant liquids (NGPL) inventory trends. September NGPL inventories ended at 199 million barrels, with October rising marginally to 202 million barrels—a modest 3 million barrel build—marking the initial phase of blending activity. Butane constitutes around 20–30% of total NGPL volumes, emphasizing its critical role in the broader NGL supply chain.

US normal butane inventories (MMbbl)



Mont Belvieu isobutane weakens in October, tracking softer octane values

Isobutane prices and ratio to gasoline



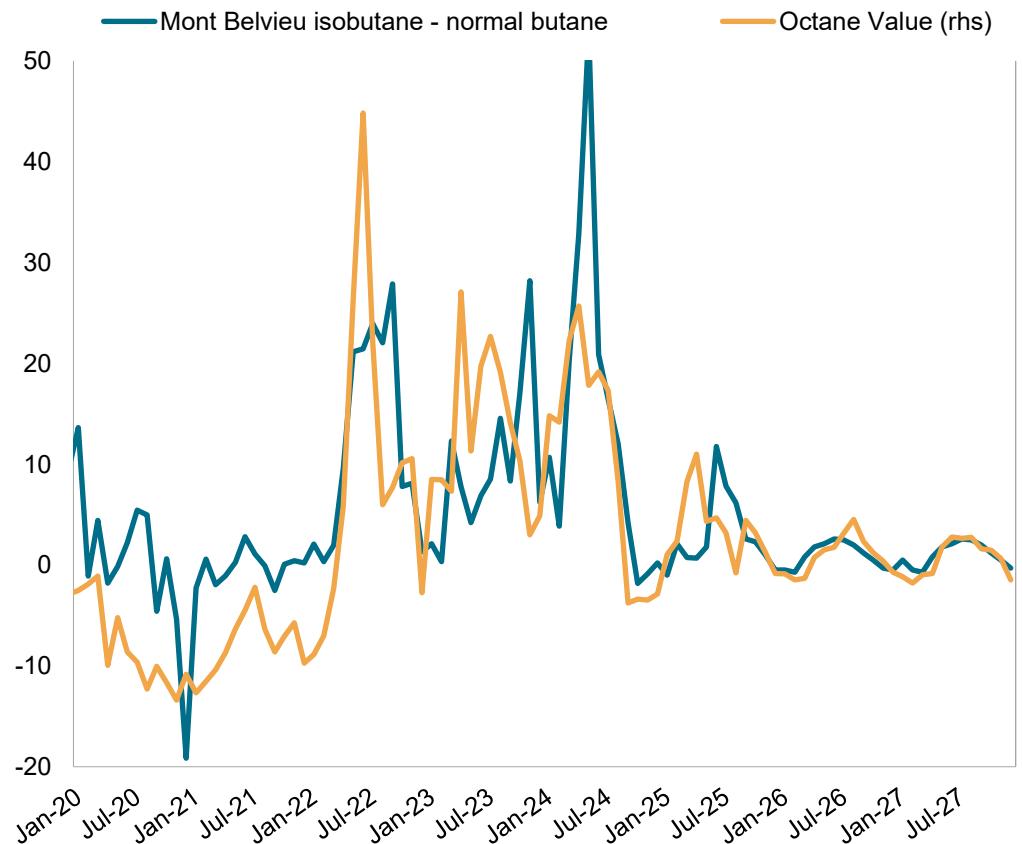
- Mont Belvieu isobutane prices dropped by 7 cpg in October, largely tracking declines in alkylate and reformate values, which are its primary end uses. USGC octane values decreased from 3.49 c/oct-gal to 3.31 c/oct-gal over the month. Isobutane typically moves in tandem with octane values, which can experience temporary spikes and drops during seasonal gasoline transitions. This time, the octane values are expected to decline as the winter season begins, driven by increased butane blending that reduces the need for octane enhancers.
- USGC octane values are forecasted to ease modestly through 2025 and 2026, pressured by a narrowing gasoline-naphtha spread and improving ethylene margins. Weak ethylene margins in recent years encouraged increased naphtha blending, raising its share in the US gasoline pool from 25–26% in 2020–2021 to 29% in 2022–2023; however, as ethylene margins recover, naphtha and related feedstocks are expected to revert to petrochemical use. This shift will reduce octane-boosting blendstock availability. Limited expected reformer outages over the next two years will further cap octane value upside and constrain bullish potential for isobutane prices. Yet, given robust NGL supply, if naphtha supply outpaces global demand, marginal naphtha may be blended back into gasoline, increasing the need for octane enhancers like isobutane.

Data compiled October 31, 2025

Sources: S&P Global Commodity Insights.

Seasonal trends push isobutane-butane spread toward zero

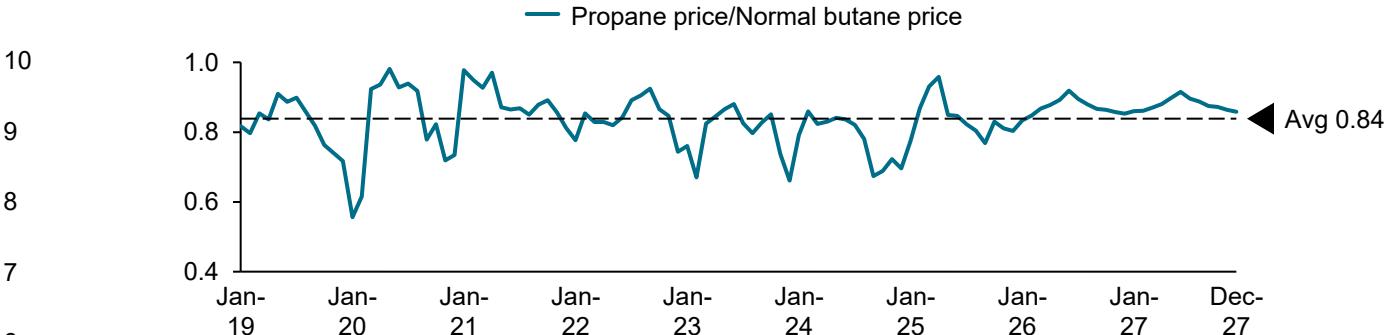
Isobutane - normal butane price spread and octane value (cpg)



Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

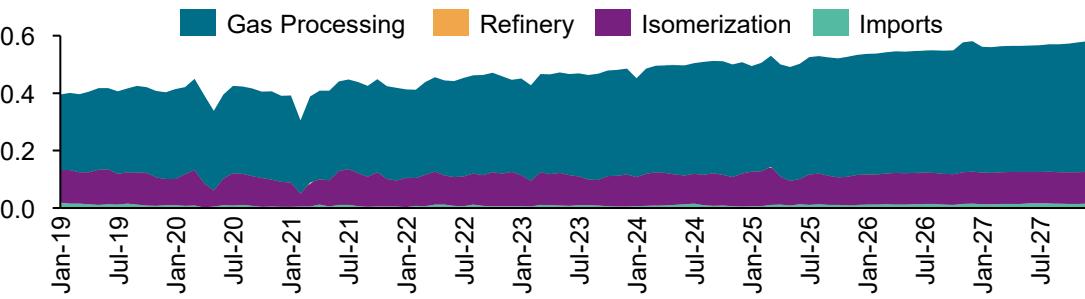
Mont Belvieu propane price to normal butane price ratio



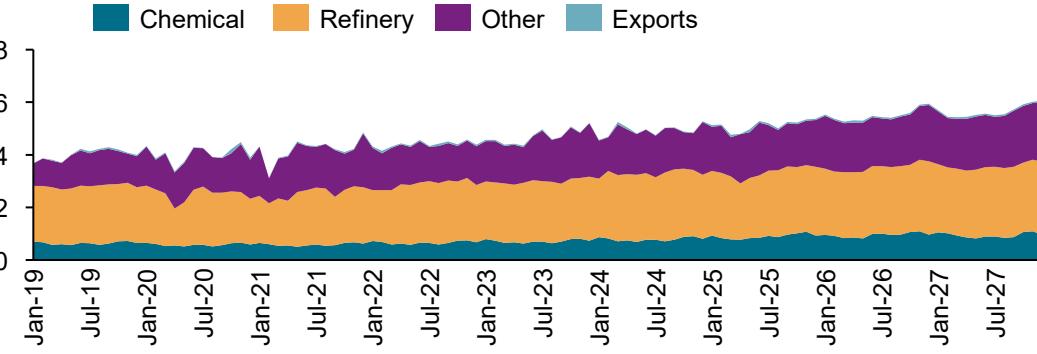
- The isobutane-normal butane spread held within the typical 2 cpg range in October, with both prices declining in line with market movements. Normal butane prices fell in response to crude and Saudi CP cuts, while isobutane prices dropped due to falling octane values. Looking ahead, as normal butane prices are expected to rise during the peak blending season and isobutane prices decline alongside octane values in winter, the spread is likely to narrow further—possibly to around 1 cpg—and may even turn negative depending on the strength of the butane price rally.
- Looking ahead to 2026, octane values are projected to soften further as the gasoline-naphtha spread narrows. This, coupled with lower gasoline and reformer operating costs, is expected to exert sustained pressure on alkylate prices, curbing isobutane demand and limiting upside potential for isobutane prices.
- Meanwhile, the butane–propane spread narrowed by 6 cpg in October as propane prices outpaced those of butane. This divergence reflects stronger seasonal demand and export growth for propane, driven by its critical role in heating and industrial applications during the upcoming winter. Propane's price resilience is further supported by tightening supply conditions and increased export activity. In contrast, butane prices face downward pressure from abundant supply and softer blending demand, accentuating the narrowing spread and highlighting divergent market fundamentals between these two key LPG components.

Isobutane inventories hold above average on stable demand

US isobutane supply (MMb/d)



US isobutane demand (MMb/d)

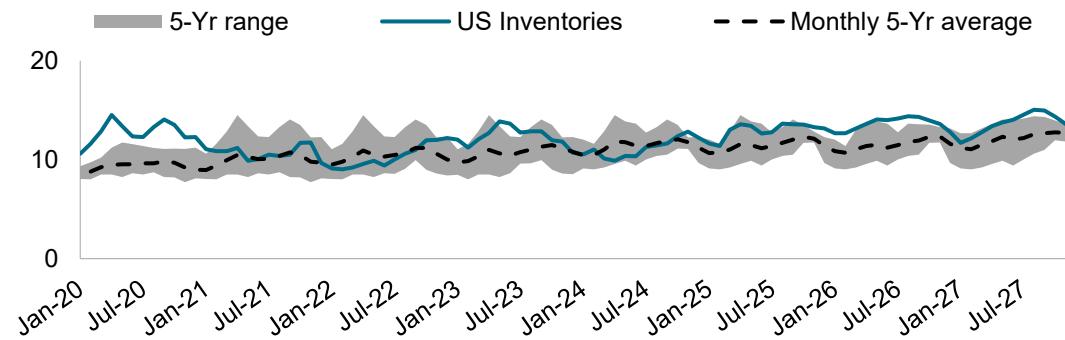


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights; US Energy Information Administration.

- According to EIA data, US isobutane inventories increased by approximately 150 thousand barrels in July 2025. This rise is likely driven by robust supply coupled with stable demand in the market. Isobutane is known to be a thin market, meaning even minor disruptions in production or demand can cause significant price volatility. Unlike the seasonal volatility seen in June during the switch from winter to summer gasoline grades, July displayed stable isobutane fundamentals with normalized octane values. Looking ahead, refinery demand for isobutane is expected to remain steady. Factors such as reduced naphtha blending, softening octane values, and a gradual decline in gasoline production are likely to support stable demand for isobutane. With this steady demand alongside ample supply, inventories are expected to remain elevated compared to historical averages, which will limit the potential for significant inventory drawdowns and support a balanced supply outlook in the coming months.
- EIA's data on isobutane consumption within refineries and exports could be misrepresented, as not all volumes are reported under isobutane, leading to a high product supplied numbers (implied domestic demand apart from refiners/blenders).
- Other demand includes Enterprise's iBDH and octane enhancers, Next Wave Energy Partners ethylene to alkylate operations. This could also include isobutane exports which are accounted as normal butane.

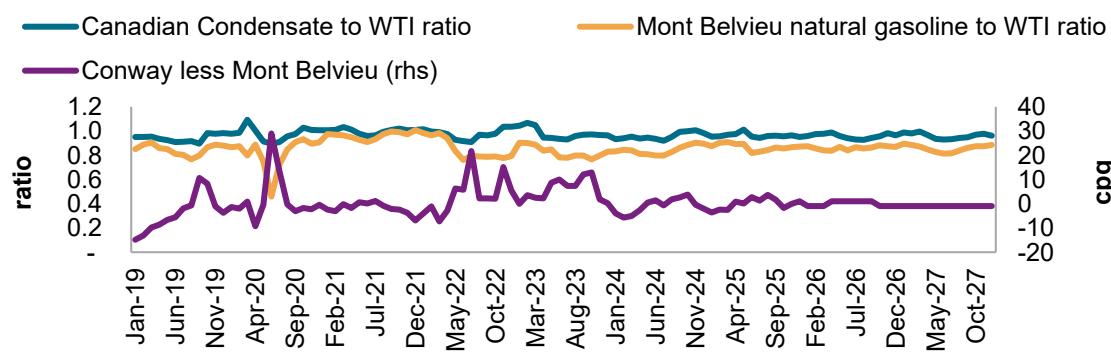
US isobutane inventories



Natural gasoline holds flat amid weaker naphtha

- September natural gasoline prices averaged 131 cpg and October the prices averaged 123 cpg.** Natural gasoline remained stable with WTI ratio at 86% as price declined along with crude price. Seasonal switch to winter-grade gasoline will likely lower demand for naphtha as a direct blending component. The overall Asian naphtha complex remains constrained as well by weak downstream petrochemical demand, ample supply and thin olefin production margins.
- Canadian condensate to Conway natural gasoline spread increased from about 13 cpg in September to 16 cpg in October.

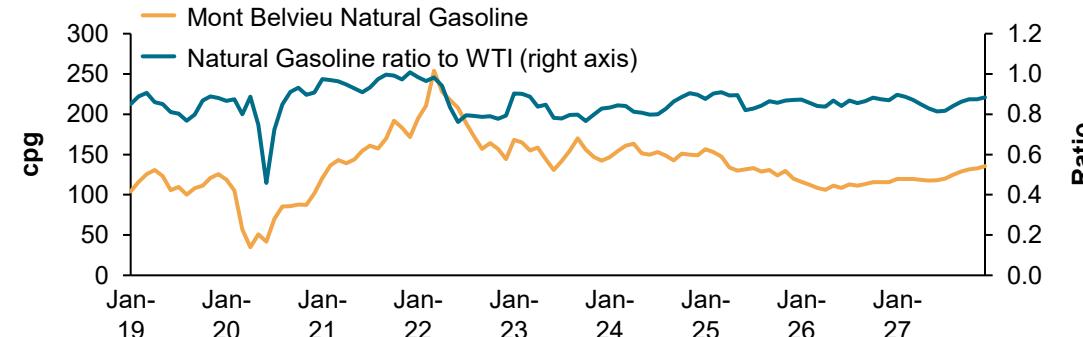
Natural gasoline price relationships



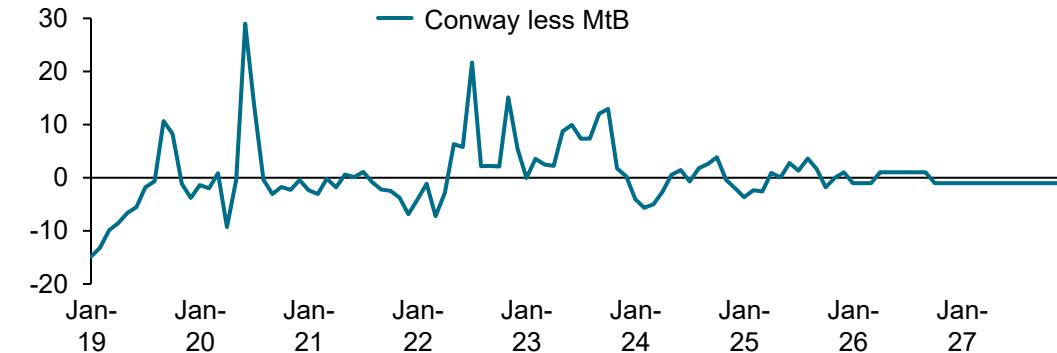
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

Mont Belvieu natural gasoline prices

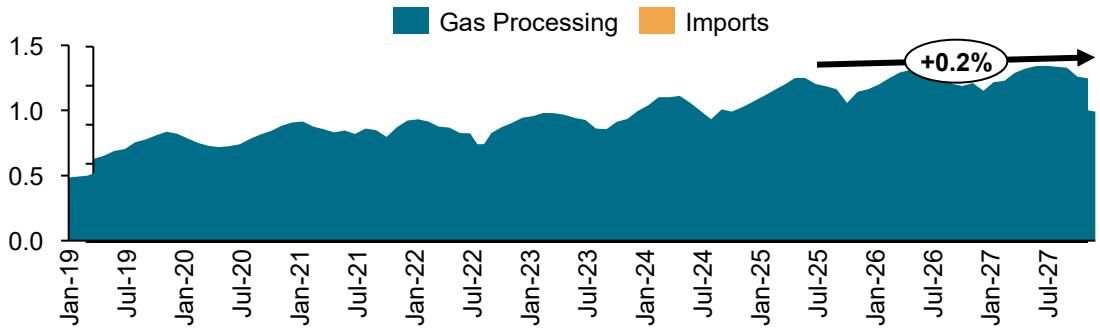


Conway less Mont Belvieu natural gasoline price spread (cpg)



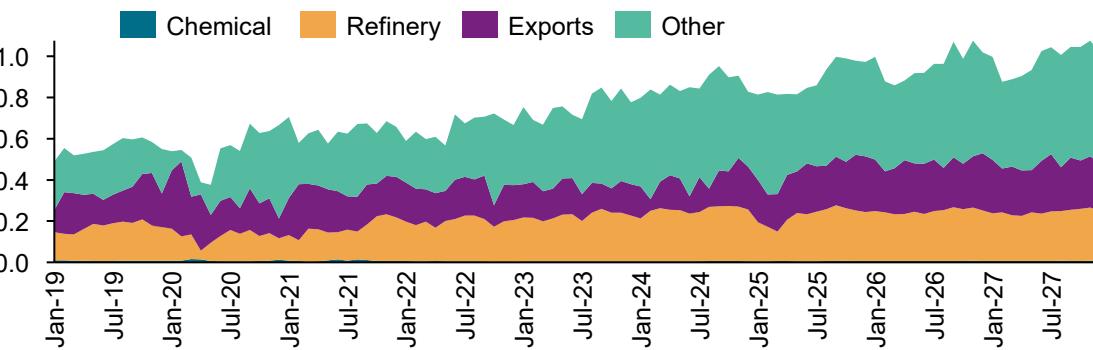
Refinery demand for gasoline blending remains stable

US natural gasoline supply (MMb/d)

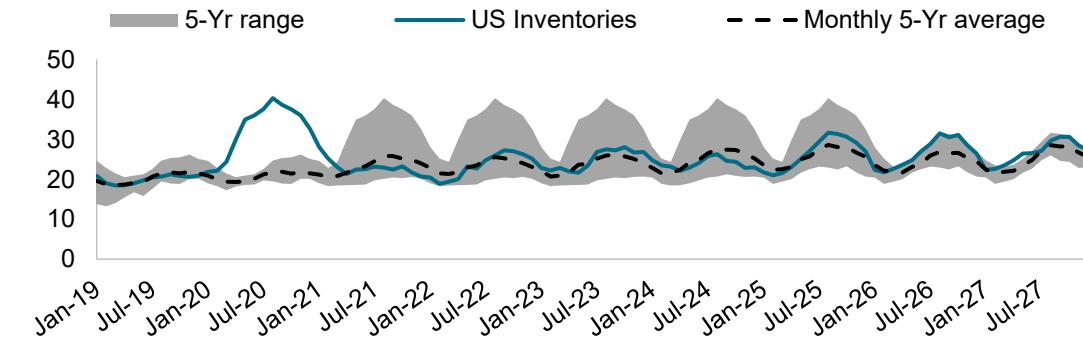


- Refinery demand for gasoline blending remained above 200,000 b/d in May, June, and July according to EIA data. This level is expected to continue through the summer months. Blending demand typically dips during the winter, particularly in January and February, due to lower seasonal gasoline production and reduced vapor pressure requirements.
- Inventories are still hanging around the 5-year average, as barrels are still blended with crude or naphtha, as represented by Other demand.
- Asian naphtha imports remain subdued amid weak petrochemical demand, but as winter approaches and LPG prices rise seasonally, the cost advantage of LPG over naphtha is expected to narrow. This shift could enhance naphtha's relative competitiveness in Q4 2025, potentially offering support to the US naphtha prices – especially if global demand begins to recover in parallel.

US natural gasoline demand (MMb/d)



US natural gasoline inventories (MMbbl)



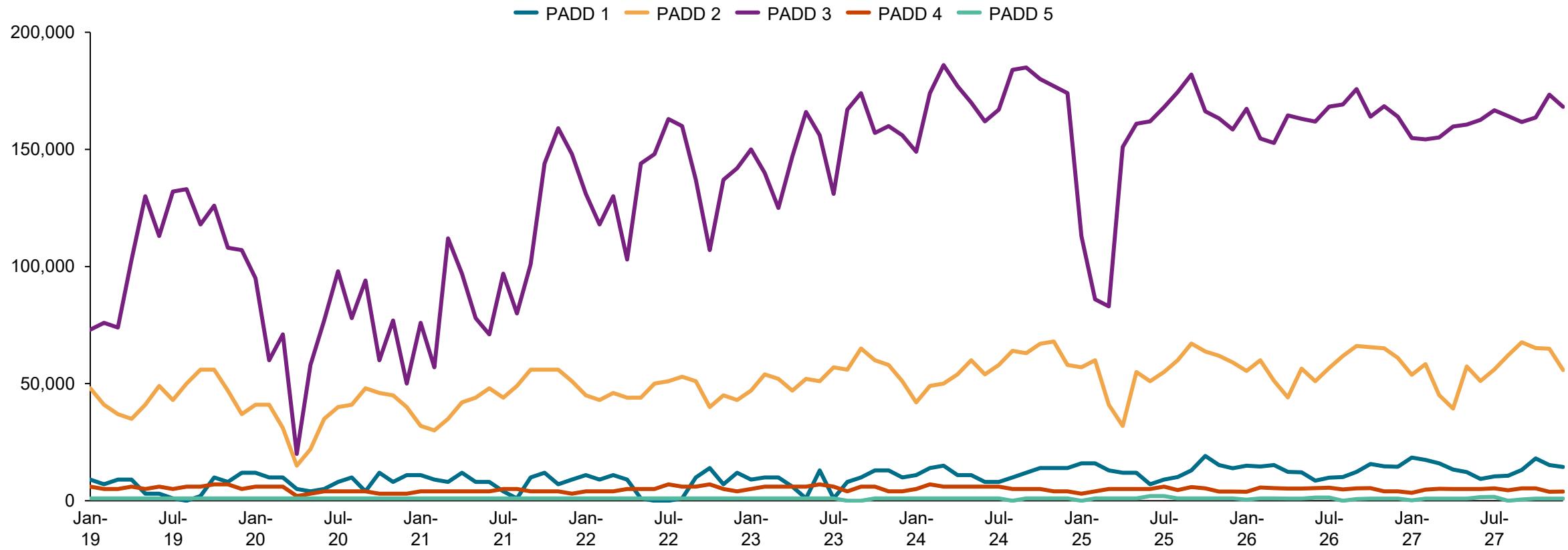
Data compiled October 31, 2025.

Notes: Natural gasoline blended as a denaturant into ethanol is included in refinery demand. Other demand indicates natural gasoline blended with crude or naphtha.

Sources: S&P Global Commodity Insights; US Energy Information Administration.

Natural gasoline demand as a blend component has increased primarily within PADD 3

US natural gasoline blending demand (thousand b/d)



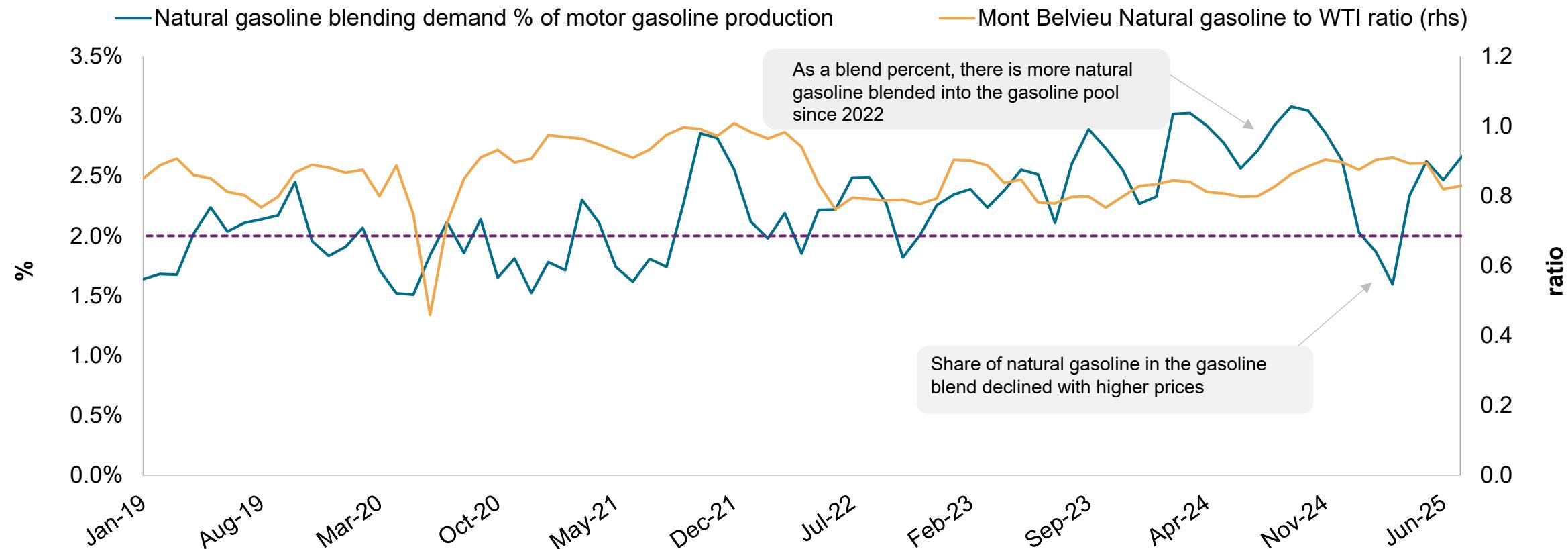
Data compiled October 31, 2025.

Notes: Natural gasoline blended as a denaturant into ethanol is included in refinery demand. Other demand indicates natural gasoline blended with crude or naphtha.

Sources: S&P Global Commodity Insights; US Energy Information Administration.

Refinery demand for natural gasoline was weak in 1Q25, driven by its higher price relative to crude but has recovered in 2Q25

Natural gasoline blending demand vs. price ratio to oil



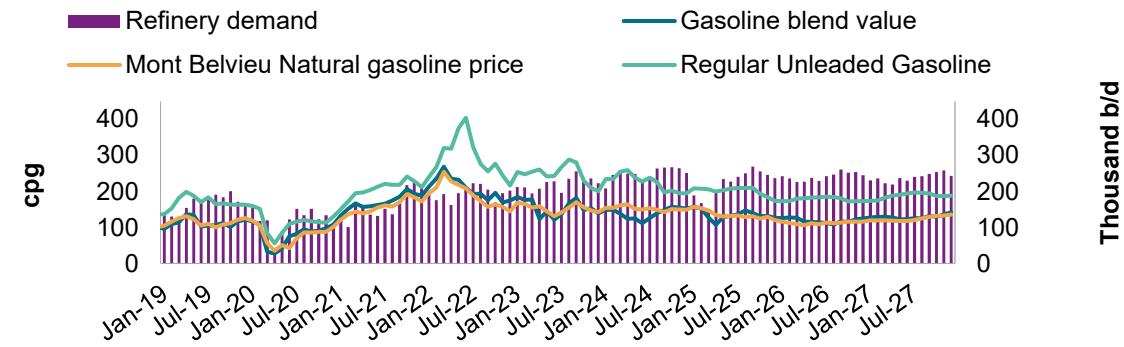
Data compiled October 31, 2025.

Notes: Natural gasoline blended as a denaturant into ethanol is included in refinery demand. Other demand indicates natural gasoline blended with crude or naphtha.

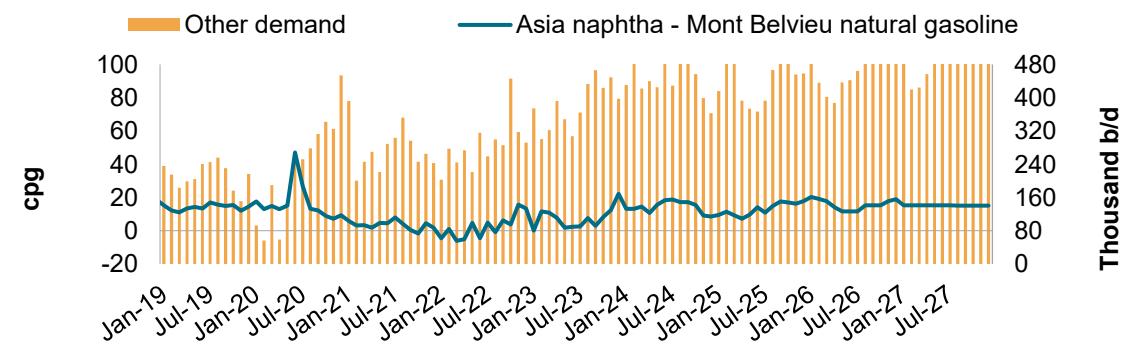
Sources: S&P Global Commodity Insights

Natural gasoline market and economics

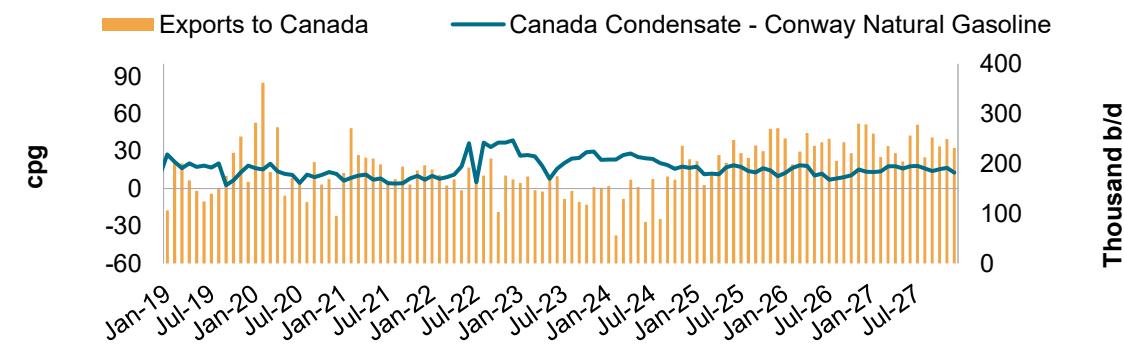
Natural gasoline refinery demand and blend value



Natural gasoline other demand and economics



Natural gasoline Canadian diluent demand and economics

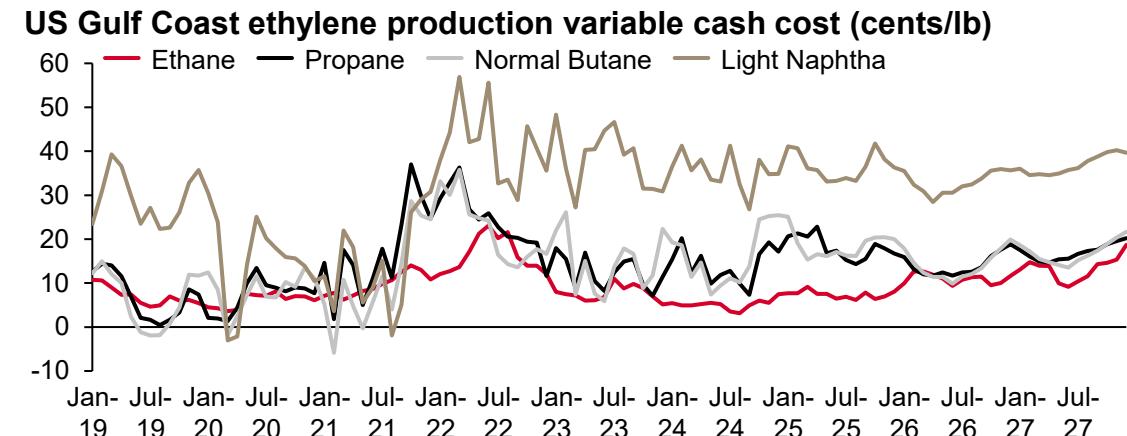
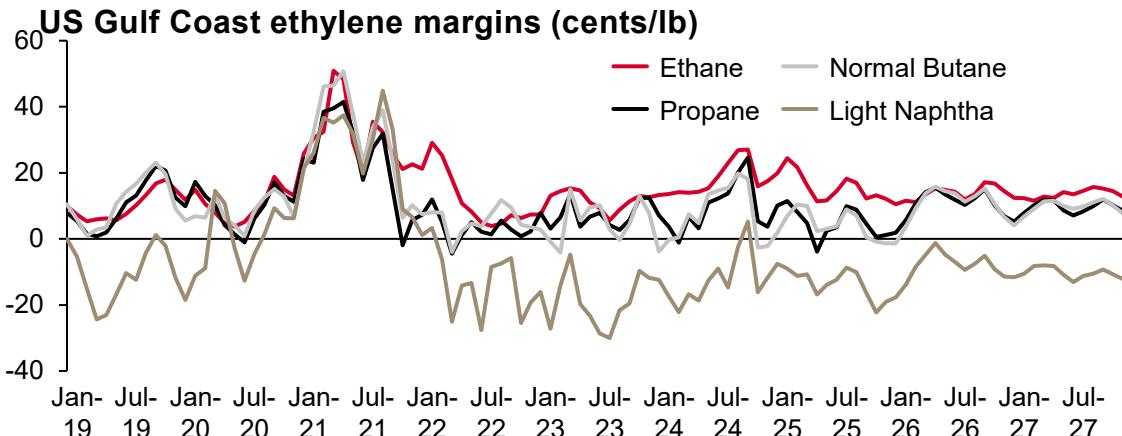


- Sufficient spread between natural gasoline and unleaded gasoline lead to more natural gasoline being blended on a percentage basis. If natural gasoline price increase because of increase in naphtha demand, we may see limited blending opportunities for natural gasoline.
- In the US, natural gasoline is predominantly used as a blend stock for gasoline, and its prices align with its blending value. The fluctuations in global naphtha prices also plays a significant role in influencing natural gasoline prices at the USGC.

Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

Ethylene margins face pressure as feedstock costs rise



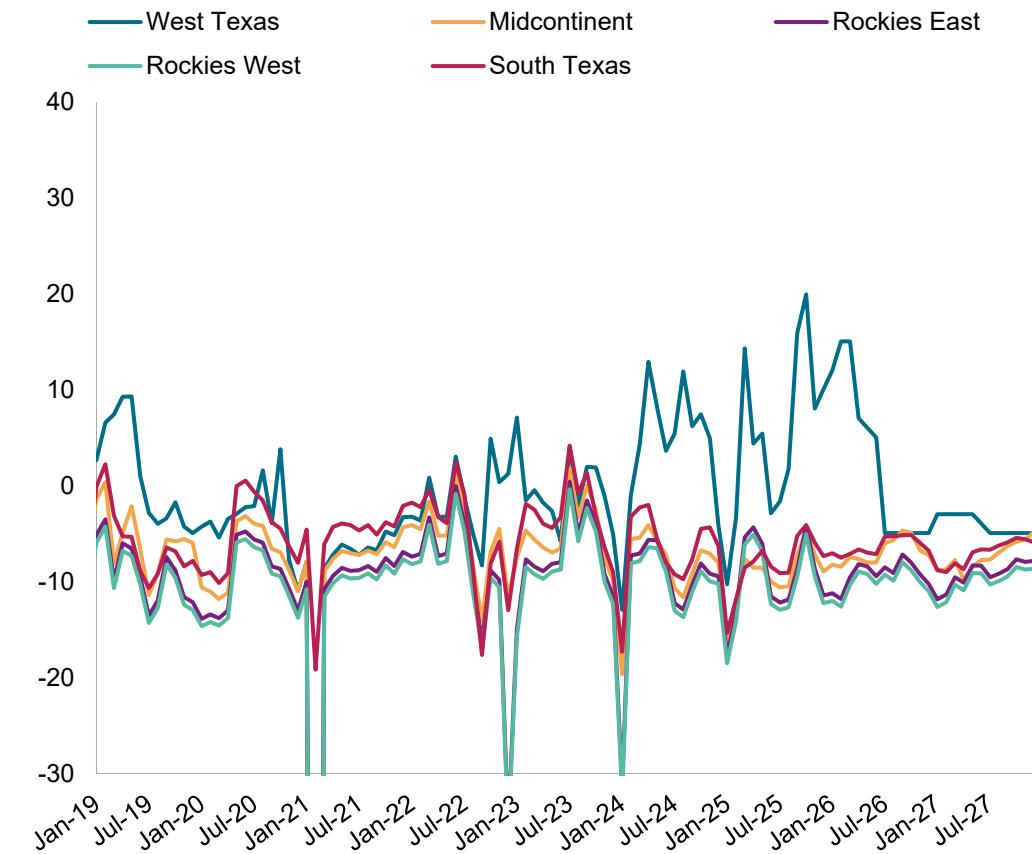
- US ethylene spot prices peaked on July 29 at \$628/mt on worries of low inventories and outages but dropped to \$441/mt by Aug. 29 as these concerns waned. Prices have been flat since dropping to \$413/mt on October 10, and US ethylene is expected to mostly move sideways through the end of the year. Average monthly prices are projected at \$554/mt in 2026 and \$590 in 2027. US ethane variable margins are projected to average ~\$347/mt in 2025, \$311/mt in 2026, and \$297/mt in 2027; weakening as ethane costs rise.
- Chinese ethane importers continue to pay only a 1% tariff on US ethane, but there are concerns over the latest shipping dispute. Tracking natural gas, MB ethane prices had been rising from mid-August and peaked near \$215/mt on Oct. 9, before falling back to \$192/mt on Oct. 17. MB ethane prices will likely rise with LNG-driven natural gas prices to ~\$274/mt in February 2026 but drop off during the spring. Ethane variable cost of production will track ethane prices.
- US propane inventories are well above the 5-year average. Production remains strong with no special inventory draw from crop drying demand. Mont Belvieu propane prices have plunged from \$369/mt on Sep. 26 to \$311 on Oct. 16 following an EIA inventory report. Prices are forecast to decline following crude oil into mid2026, but some price support will be expected in winter.

Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights.

Natural gas prices are projected to rise gradually through 2027, while gas plant gross margins are expected to decline

US ethane extraction margins (cpg)

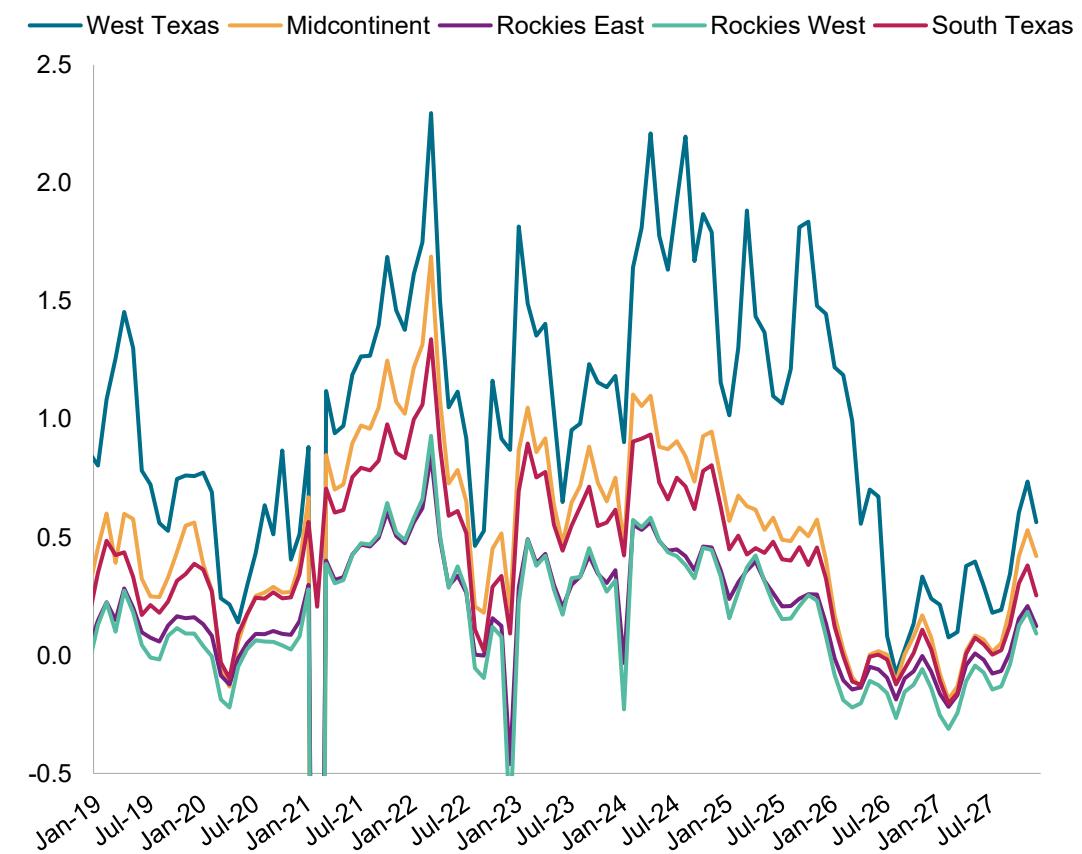


Data compiled October 31, 2025.

Ethane extraction margins are not representative of contractual ethane recovery.

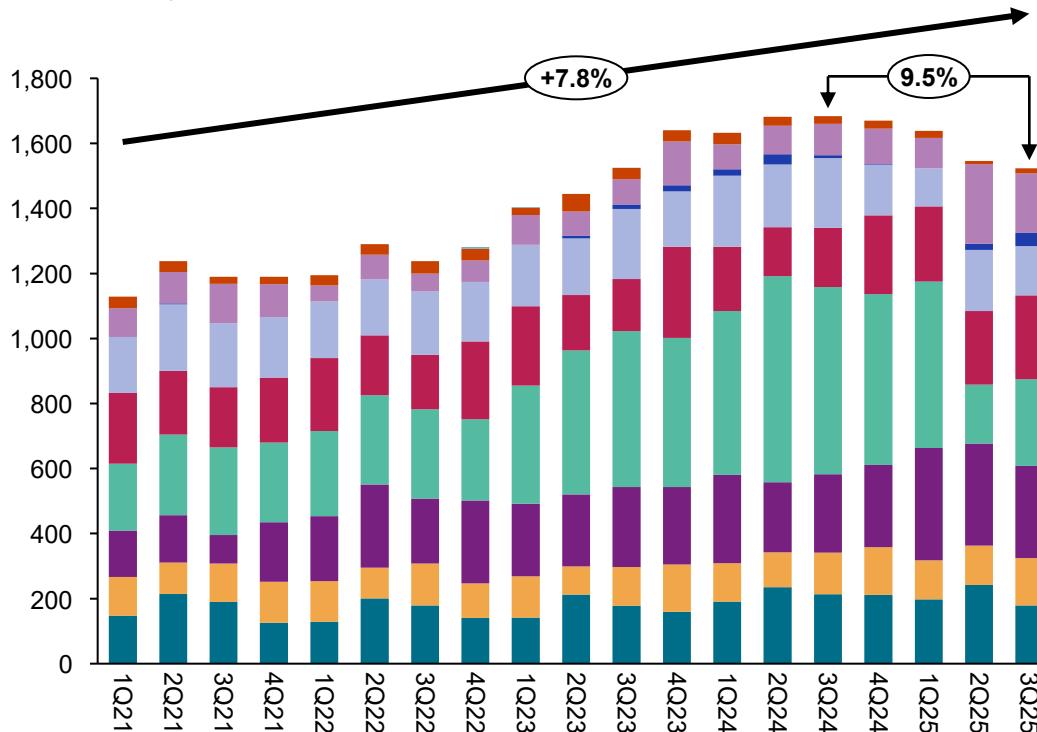
Source: S&P Global Commodity Insights.

US gas plant gross margins (\$/MMBtu)

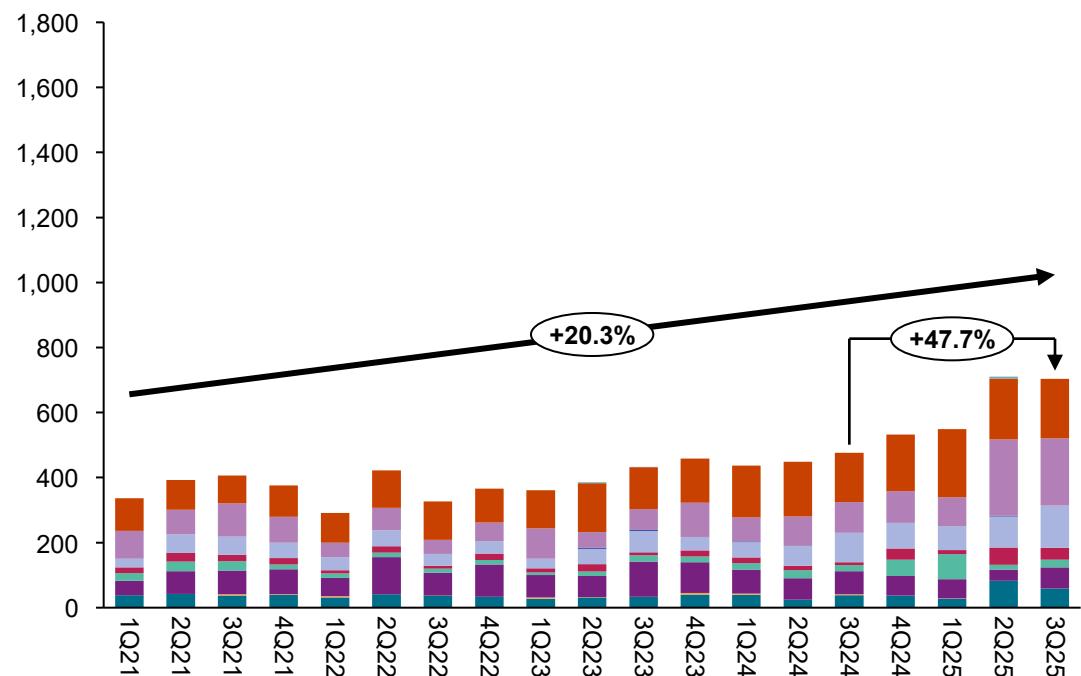


US-China tariff dispute led to a drop in propane exports in 3Q 2025, while butane exports surged to Southeast Asia and countries like Japan and South Korea

US waterborne propane exports (Thousand b/d)



US waterborne normal butane exports (Thousand b/d)

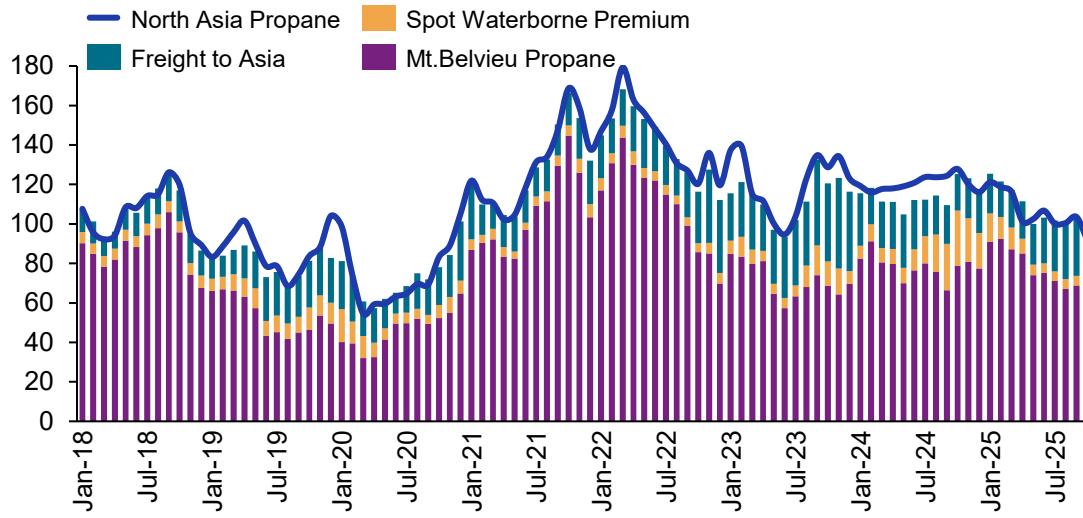


Data compiled October 31, 2025..

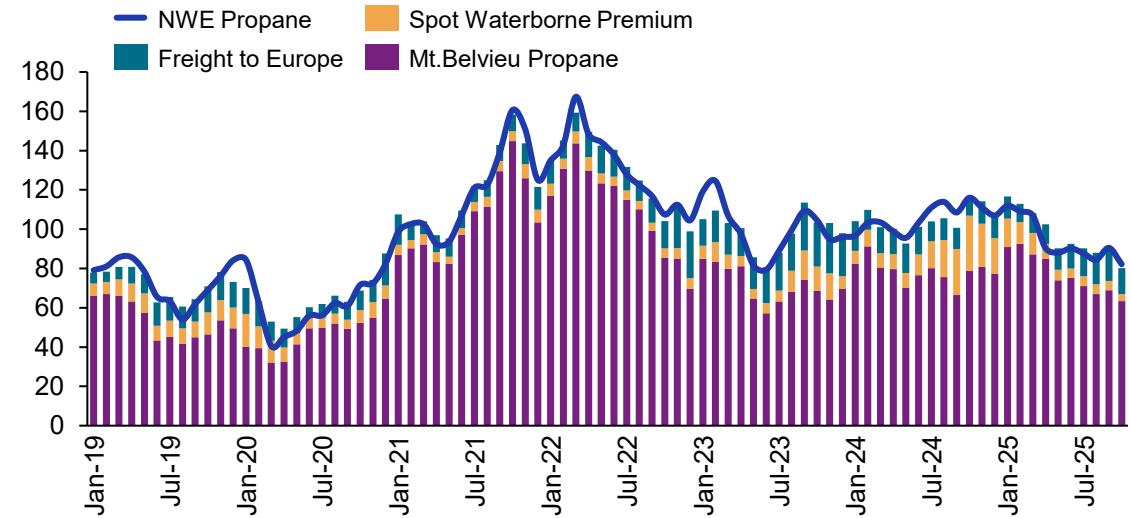
Source: S&P Global Commodity Insights. Commodities at Sea.

Propane arbitrage stays weak as prices and freight ease

US propane arbitrage to Asia (cpg)



US propane arbitrage to Europe (cpg)



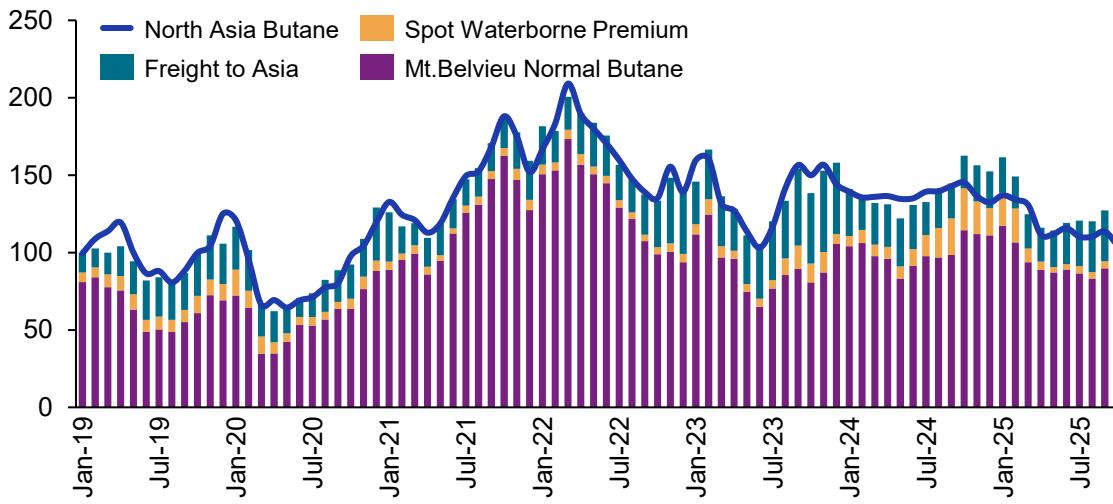
- Both US-Asia and US-Europe propane arbitrage economics remained tight in October, as global prices—especially Asia propane—fell in step with Saudi Arabia's CP cut. To enhance the arbitrage, Houston-to-Chiba freight rates dropped from an average of \$149/mt to \$124/mt, and the propane spot waterborne premium decreased from 4.8 cpg to 3.5 cpg. This easing in logistics costs reflects persistently tight arbitrage conditions arising from weaker Asian propane prices. Despite the decline in freight and premiums, the spot market remains subdued due to weak netbacks on transpacific arbitrage spot deals, preventing significant uplift in trading activity.
- At the same time, arbitrage economics between the US and the Far East further weakened in October, with narrowing price spreads limiting incentives for fresh long-haul fixtures and reinforcing a softer freight environment. This easing in freight rates appears to be a natural market recalibration rather than a structural shift, as improving export flows alongside reduced arbitrage signals temper the momentum from earlier price rallies.
- In Europe, propane market participants' buying interest has increased as regional temperatures fall heading into winter. Inland propane market activity in Northwest Europe has started to pick up with initial buyer discussions signaling a potential transition toward winter demand patterns. This growing interest in stock building, particularly among market players aiming to secure inventories ahead of anticipated demand surges, has contributed to rising propane imports into Europe.

Data compiled October 31, 2025.

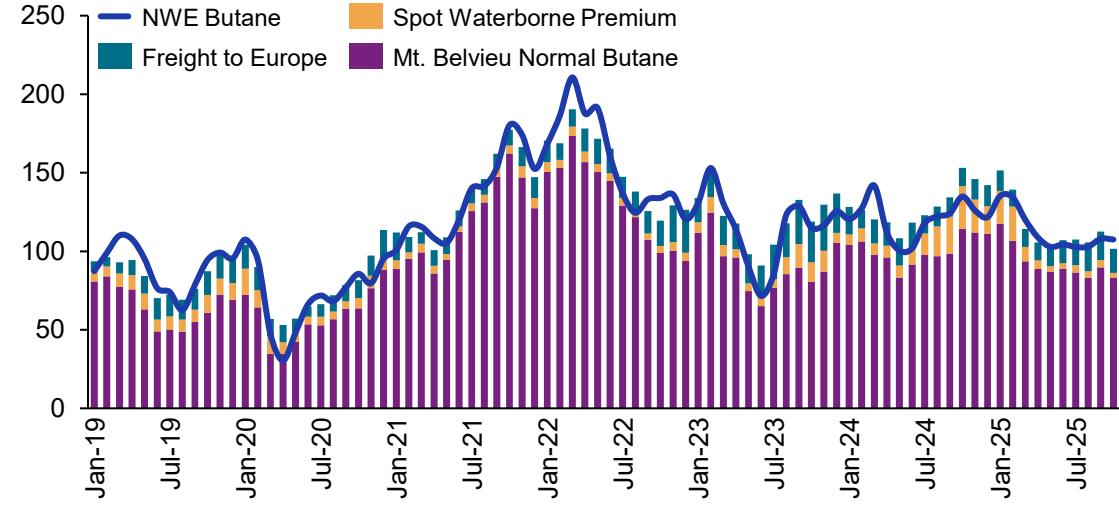
Source: S&P Global Commodity Insights

Tight margins and competition pressure butane arbitrage

US butane arbitrage to Asia (cpg)



US butane arbitrage to Europe (cpg)



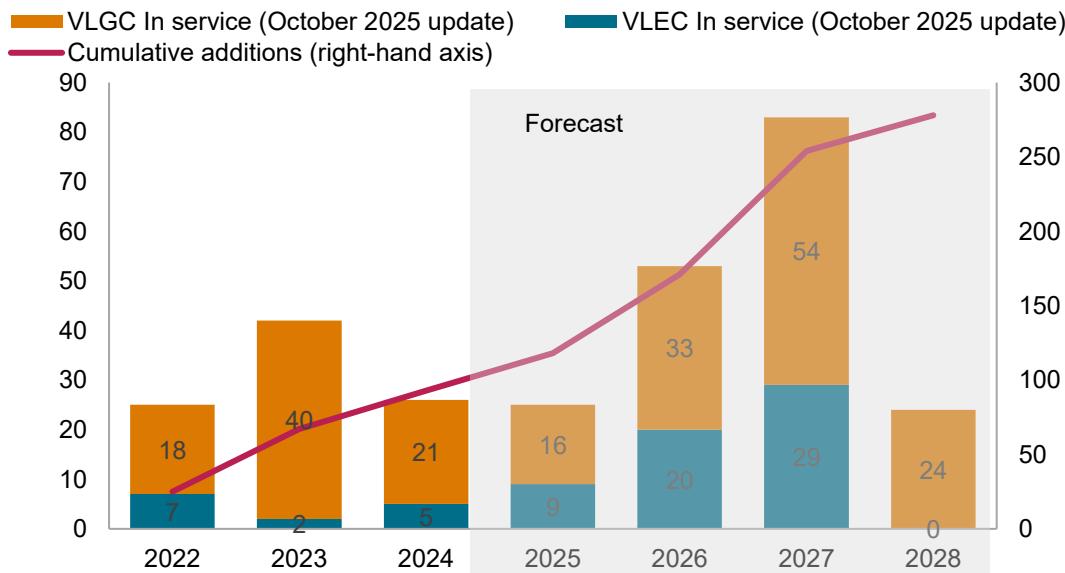
- Although U.S. butane exports increased notably over the summer months, the persistently weak arbitrage economics and soft petrochemical margins in Asia have constrained discretionary export growth. The lower Mont Belvieu butane prices in October effectively closed the arbitrage window, especially for incremental spot cargoes. Heightened price competition from Middle Eastern suppliers further limits significant upside in butane export growth under current conditions.
- For a meaningful recovery in U.S. butane exports, either a reduction in shipping costs or a rebound in Asian demand will be necessary, despite elevated U.S. butane prices driven by fall and winter blending needs. Nevertheless, steady demand from Southeast Asia and Northeast Asia, particularly Japan and South Korea, has sustained butane flows through Q2 and into Q3 2025, thus supporting total export volumes despite weak netbacks.

Data compiled October 31, 2025.

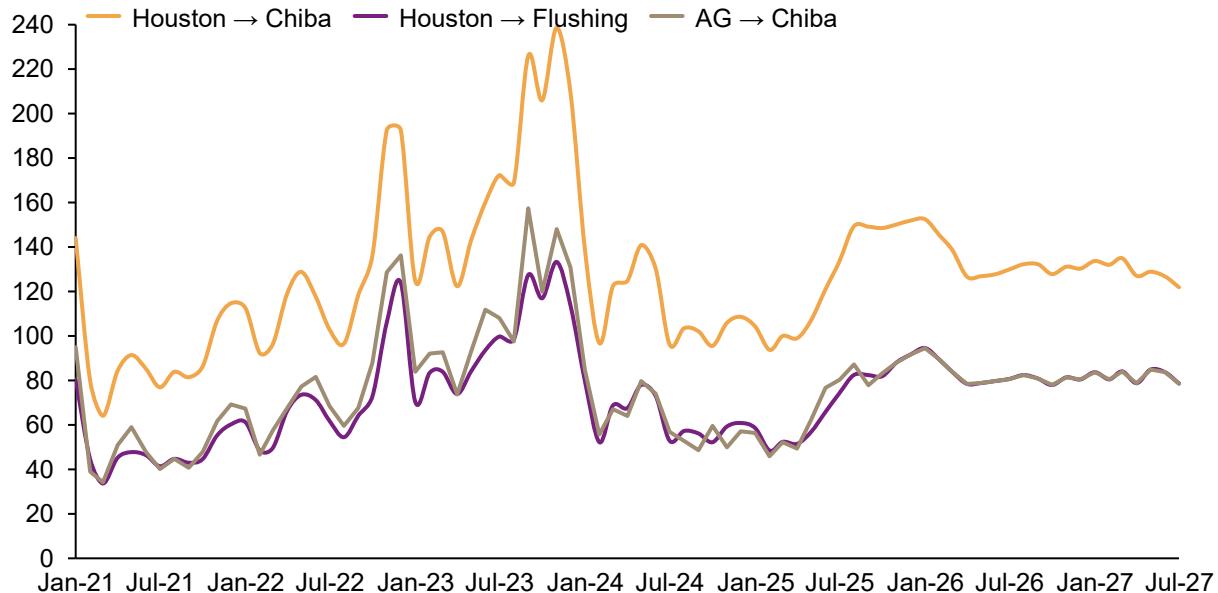
Source: S&P Global Commodity Insights

USTR fees drive VLGC fleet reshuffling, raising US-Asia logistic cost

VLEC and VLGC fleet additions per year (number of vessels)



Freight rates (\$/mt)



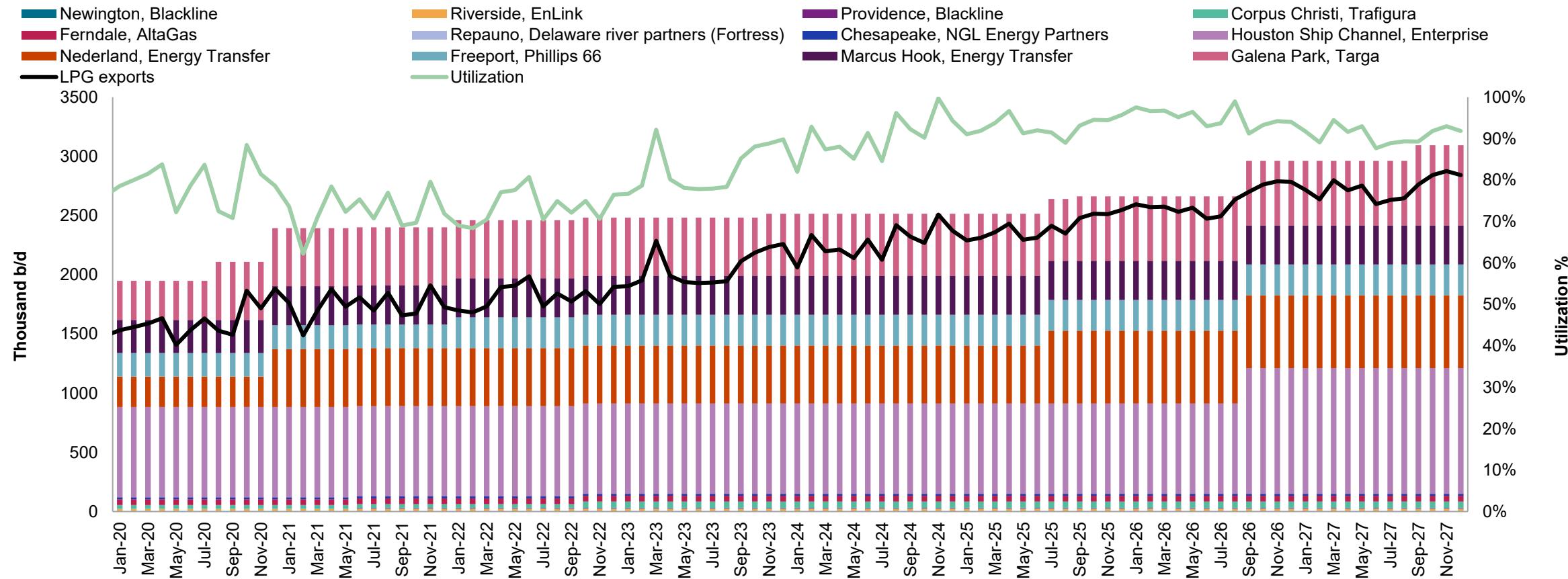
- The Houston–Japan VLGC freight rate continued to soften during the week ending October 27, 2025, slipping from \$114/mt to \$112/mt and marking a second consecutive weekly decline. Although the adjustment is moderate, it reflects the market's cautious sentiment as participants continue to adapt to the post– USTR Section 301 landscape. The framework, which introduced new compliance requirements for vessels owned or operated by Chinese entities, continues to shape scheduling strategies and contractual behavior, with charterers exercising greater prudence in voyage planning and rate negotiations. The present freight level near \$112/mt is broadly aligned with improved vessel availability in the Atlantic Basin, where tonnage supply has normalized following early-October congestion and rescheduling.
- According to the latest market intelligence, the global Very Large Gas Carrier (VLGC) fleet currently stands at approximately 415 vessels in service as of 2025, with an additional 116 VLGCs scheduled for delivery between 2025 and 2028. Similarly, the Very Large Ethane Carrier (VLEC) fleet includes 36 vessels in service plus 51 newbuilds anticipated through 2028. This substantial fleet expansion aligns with the strong growth trajectory in NGL production and international trade flows. The orderbook vessels increasingly feature dual-fuel capabilities for environmental compliance, reflecting industry trends towards decarbonization. This growing and modernizing fleet capacity is poised to support continued trade volume increases driven by expanding U.S. export terminals and rising Asian import demand.

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights, S&P Global Market Intelligence.

Expanding LPG export capacity: essential for increasing shipments and reducing utilization low 90% by 2027

US LPG export capacity and utilization



Data compiled October 31, 2025.

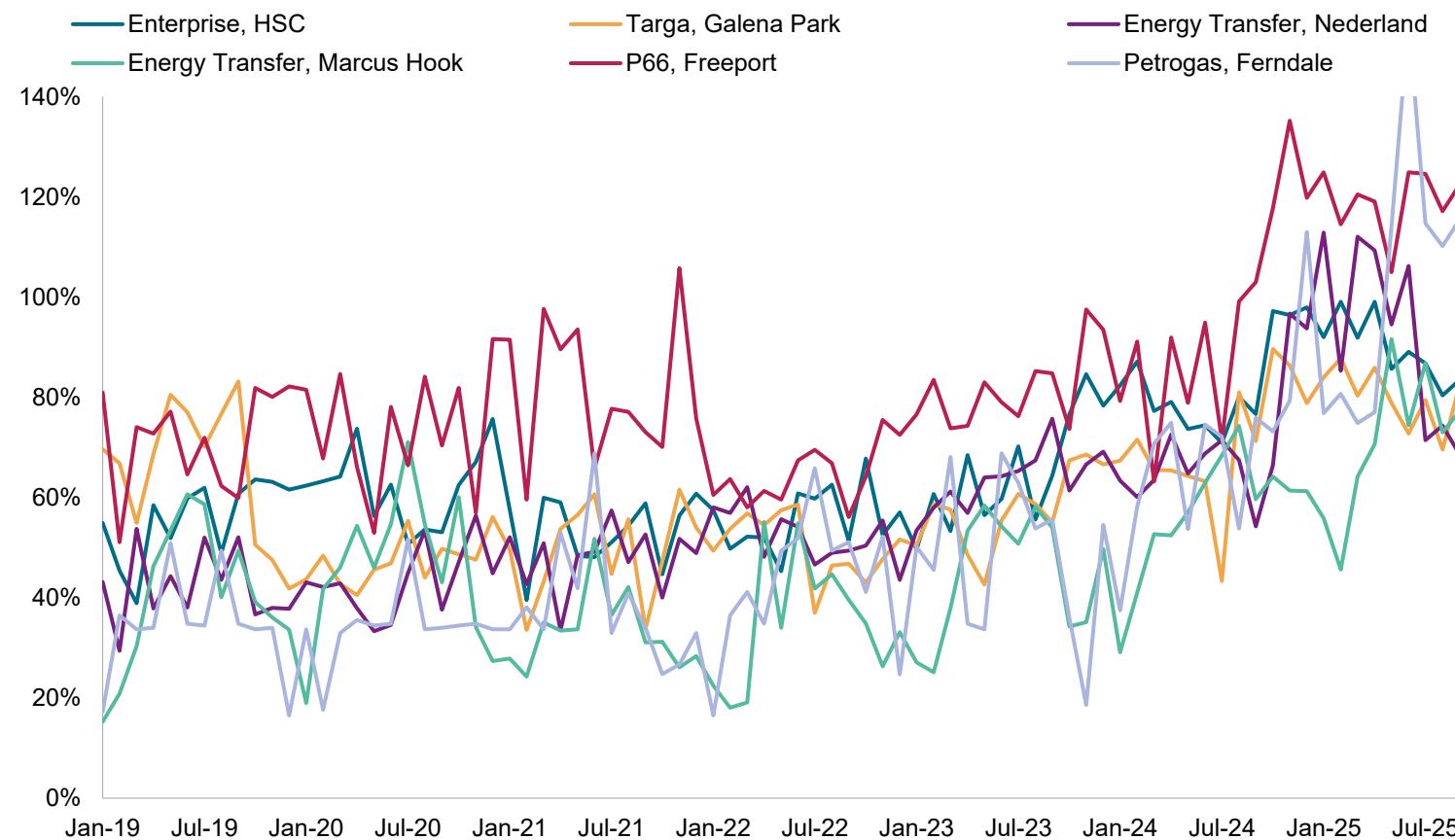
Note: Terminal capacity is listed in the infrastructure section as is based on data collected based on company announcements. Enterprise's propane flex capacity of 360,000 b/d at new planned Neches ethane terminal at Beaumont is not included.

Nederland expansion Flexport will add up to 250,000 b/d of NGL export capacity by late 2025, with full contracts starting in January 2026 and based on our estimate, an even split between ethane/ethylene and propane.

Source: S&P Global Commodity Insights.

USGC terminal utilization is expected to increase as exports ramps up

LPG terminal utilization



Data compiled October 31, 2025.

Individual terminal utilization is based on S&P Global's LPG exports terminal nameplate capacity, as indicated in the infrastructure section. Some companies indicate their effective operating capacity to be lower than nameplate capacity due to propane-butane export capability, logistical delays and other factors.

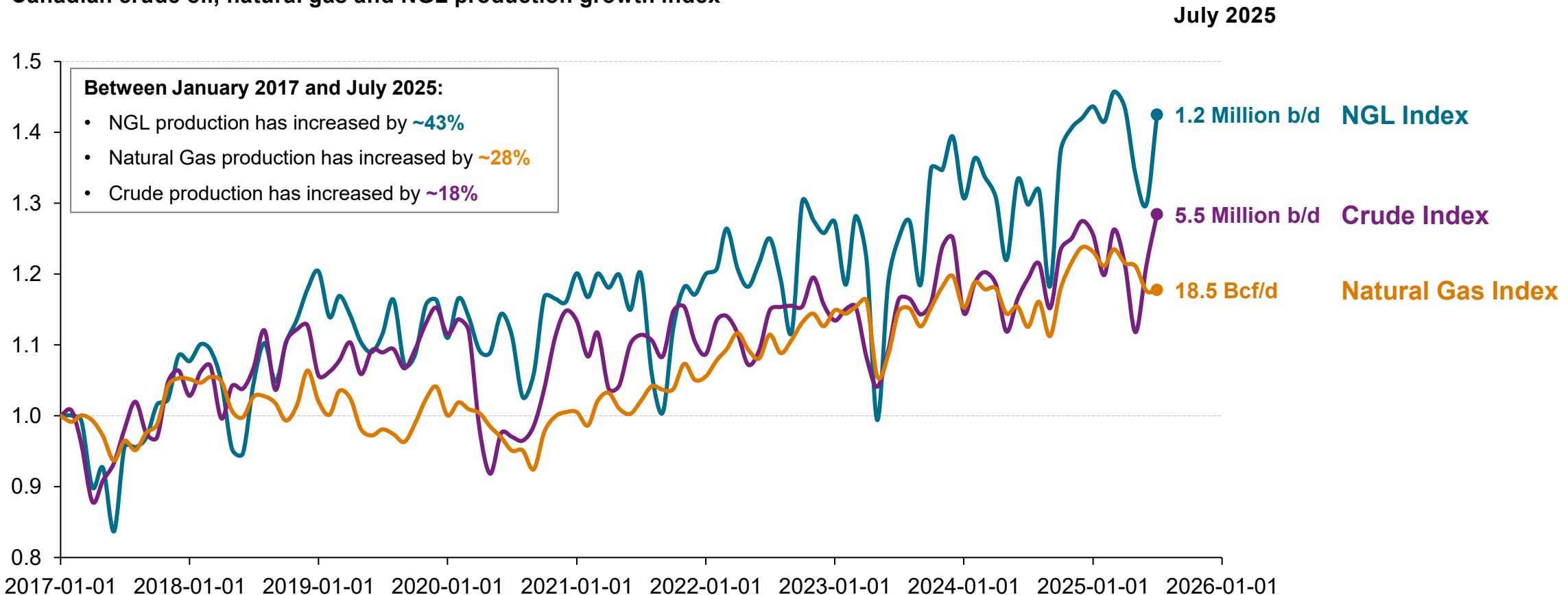
Source: S&P Global Commodity Insights.

- Spare capacity remains ample for now, as reflected in the slow operational ramp-up at Energy Transfer's Flexport expansion at the Nederland terminal, which began service in July but has yet to significantly boost export volumes. However, the terminal is now capable of loading three additional VLGC cargoes per month, with plans to ramp up to six, ultimately adding 100,000 b/d of capacity. Anticipation of this growth is already supporting stronger VLGC demand ahead of the full expansion.
- The terminal is also slated to handle ethane and ethylene exports, with ethylene shipments expected to begin in Q4 2025. Most of these exports will move under fixed-fee contracts starting in 2026.
- Ferndale terminal recorded its highest export volume in June 2025 at 77,000 b/d, with most cargoes bound for the Far East, including South Korea and Japan.

Canada

Beginning in 2018, the growth rates of Canadian NGLs, crude oil, and natural gas started to separate, with NGLs generally exhibiting a faster growth rate

Canadian crude oil, natural gas and NGL production growth index



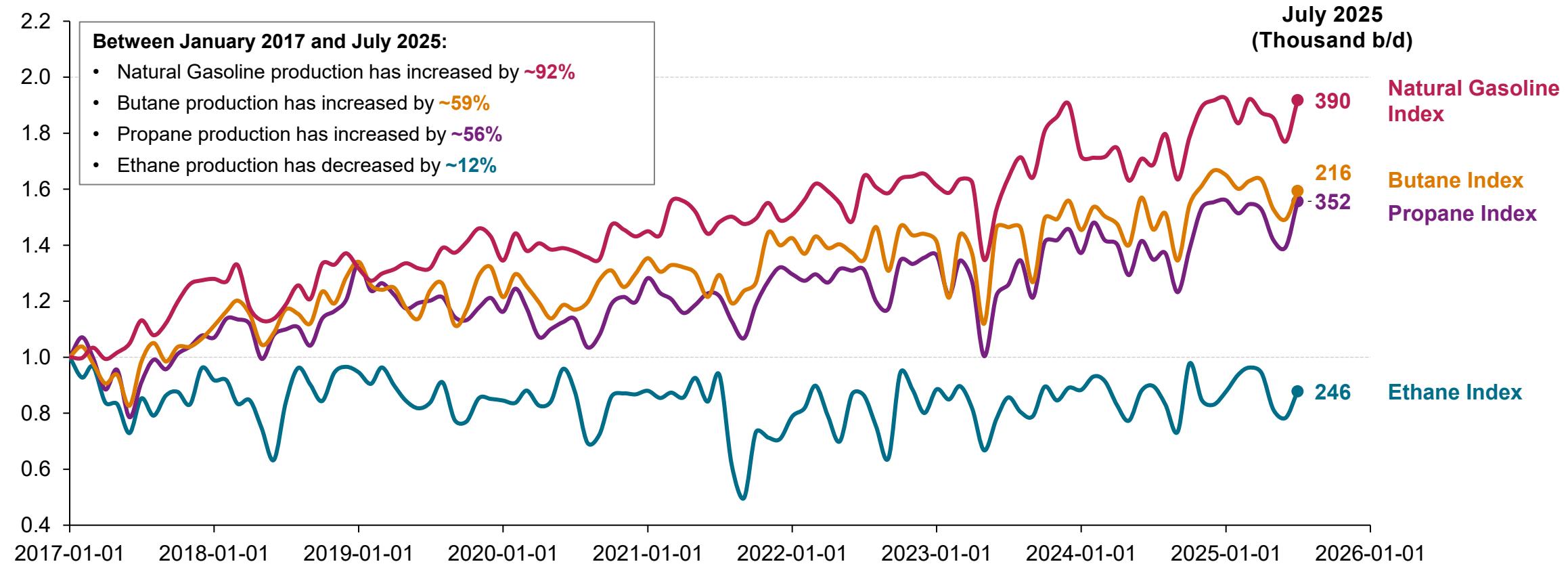
Data compiled October 31, 2025.

Notes: Marketable natural gas is shown for gas production. Crude production includes heavy and bitumen crude, light crude and equivalent production. NGL data only represents gas processing / fractionation-based production and does not include refinery NGL volumes. NGL production does not include condensate volumes. Actual production data for the latest Statistics Canada month is shown in the chart for Canadian crude, natural gas and NGLs.

Source: S&P Global Commodity Insights, Statistics Canada, Canada Energy Regulator

Production of heavier NGL products is growing more rapidly compared to lighter ones, while ethane output remains stable due to its relatively limited demand

Canadian NGL production growth index by product

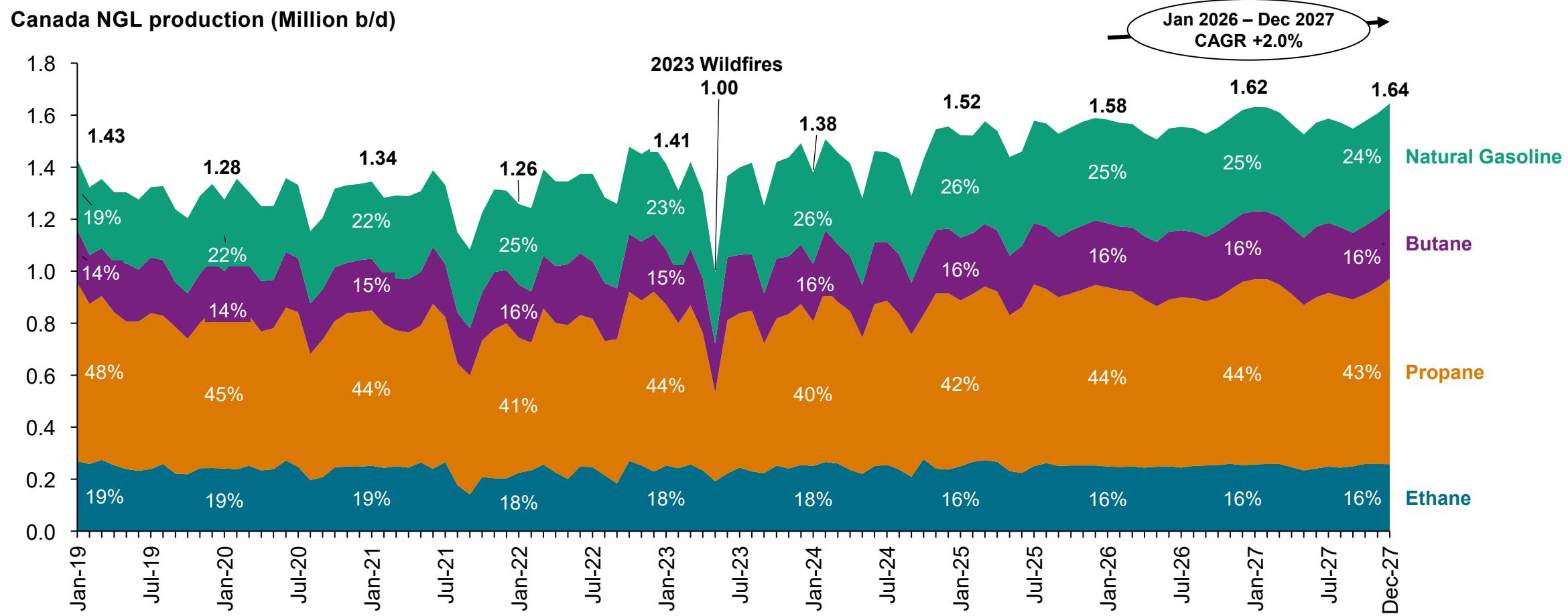


Data compiled October 31, 2025.

Notes: NGL data only represents gas processing / fractionation-based production and does not include refinery NGL volumes. Natural gasoline production does not include condensate volumes. Actual production data for the latest Statistics Canada month is shown in the chart for Canadian NGLs.

Source: S&P Global Commodity Insights, Statistics Canada, Canada Energy Regulator

Canadian NGL output is expected to experience steady growth alongside higher natural gas production and LNG exports



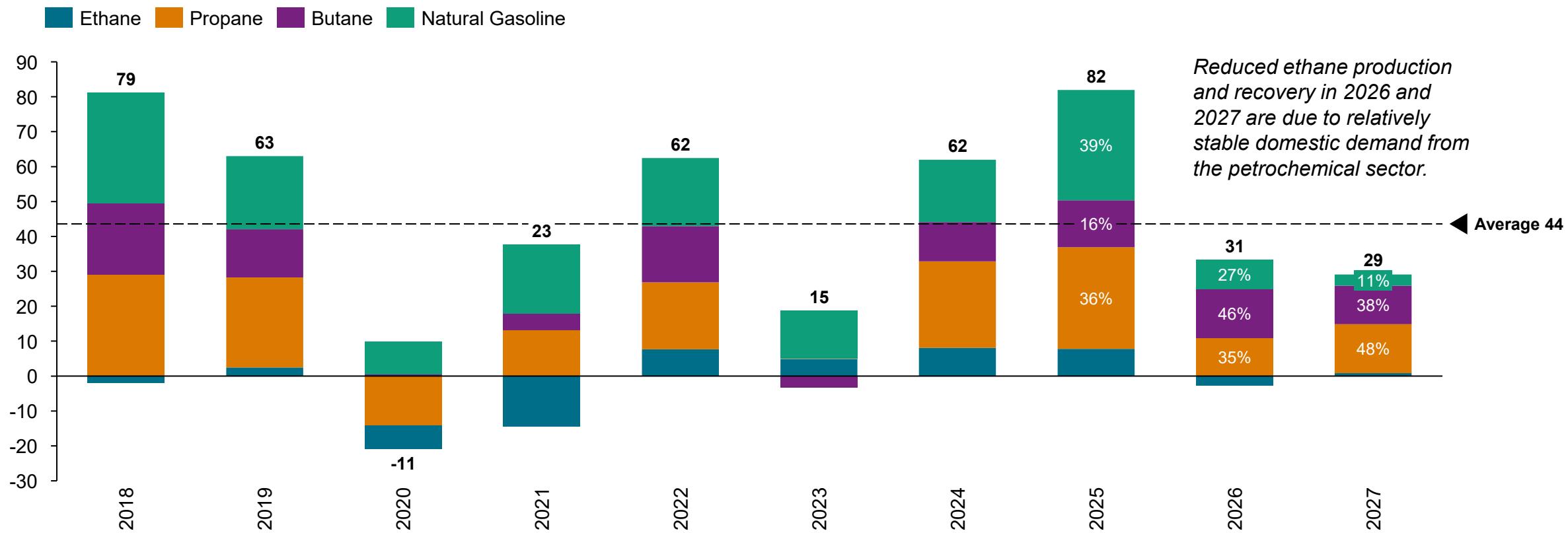
Data compiled October 31, 2025.

Notes: Compound Annual Growth Rate (CAGR) over the period of January 2026 to December 2027. NGL production from both gas processing/fractionation facilities and refineries. Natural Gasoline production does not include condensate production.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Canadian NGL production is projected to increase in 2026 and 2027, albeit at a slower rate compared to prior years, partly because of lower ethane recovery rates

Year-over-year change in NGL production by product (Thousand b/d)



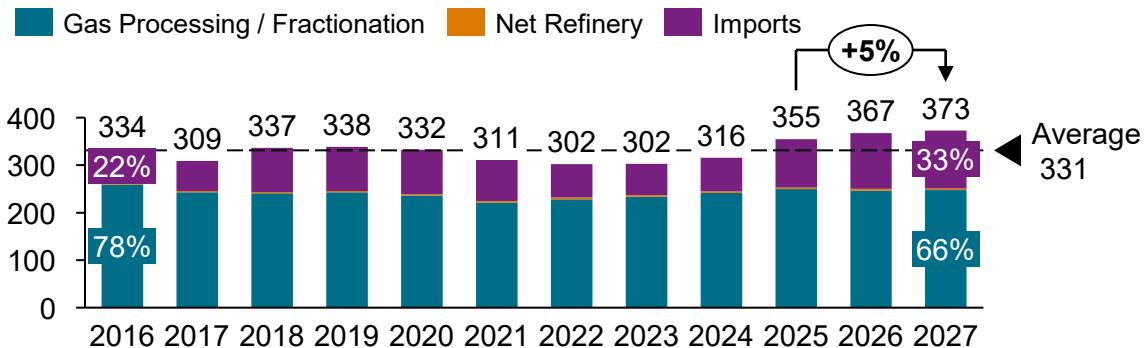
Data compiled October 31, 2025.

Note: Ethane production is impacted since varying quantities of Canadian ethane are currently rejected.

Source: S&P Global Commodity Insights.

In August, ethane production in Canada continued to be robust, but ethane imports for July declined primarily because of reduced shipments to Western Canada

Canada ethane supply (Thousand b/d)



- Ethane production in Canada continued to improve in August, rising to over 262,000 b/d from approximately 250,000 b/d reported in the prior month, marking an increase of about 5%. For the year 2025, ethane production is expected to average around 253,000 b/d, compared to approximately 245,000 b/d in 2024. While for 2026 and 2027, domestic ethane production is expected to average around 250,600 b/d.

- The domestic production rate is expected to be influenced by petrochemical demand in Alberta as well as the volume of ethane imported from the United States, given that varying amounts of Canadian ethane are currently being rejected.

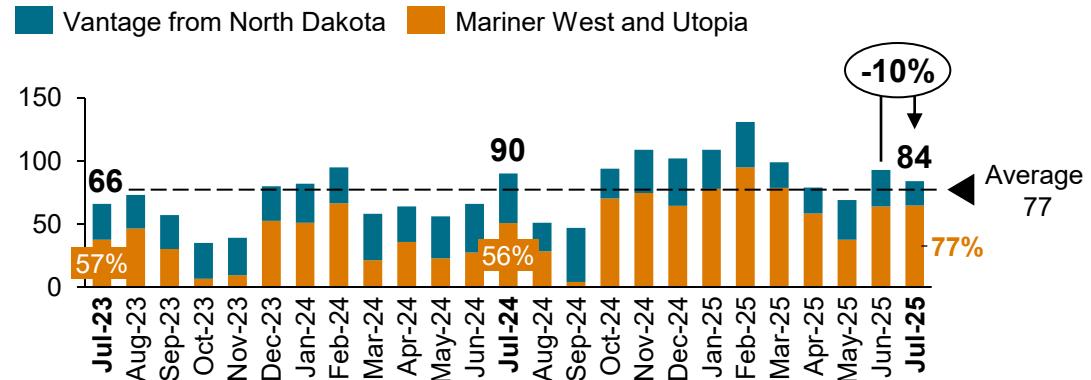
- In July, Vantage's imports from North Dakota decreased to approximately 19,000 b/d, down from around 29,000 b/d in the previous month. The import rate averaged approximately 31,200 b/d in 2023 and increased to roughly 33,100 b/d in 2024. So far in 2025, ethane imports along the Vantage pipeline have averaged just under 28,000 b/d.

- Imports at Mariner West and Utopia remained relatively stable in July, with the ethane import rate of around 64,700 b/d compared to around 64,000 b/d in the prior month. Future import rates are expected to remain strong, assuming full utilization rates are achieved at the Eastern Canada ethylene facilities.

- Imports averaged approximately 34,500 b/d in 2023, lower than the over 45,000 b/d seen in 2022. In 2024, imports averaged around 43,100 b/d, and so far in 2025, they are averaging about 68,000 b/d.

- In May, NOVA Chemicals announced that the Moore polyethylene plant was shutting down for a scheduled maintenance turnaround, with maintenance operations ongoing until September 26, 2025. On September 8, 2025, NOVA Chemicals also announced that the Corunna facility was undergoing planned maintenance activities. On October 7, 2025, NOVA Chemicals announced that elevated flaring activities were anticipated as a part of planned maintenance activities at the Corunna site.

Ethane imports to Canada (Thousand b/d)



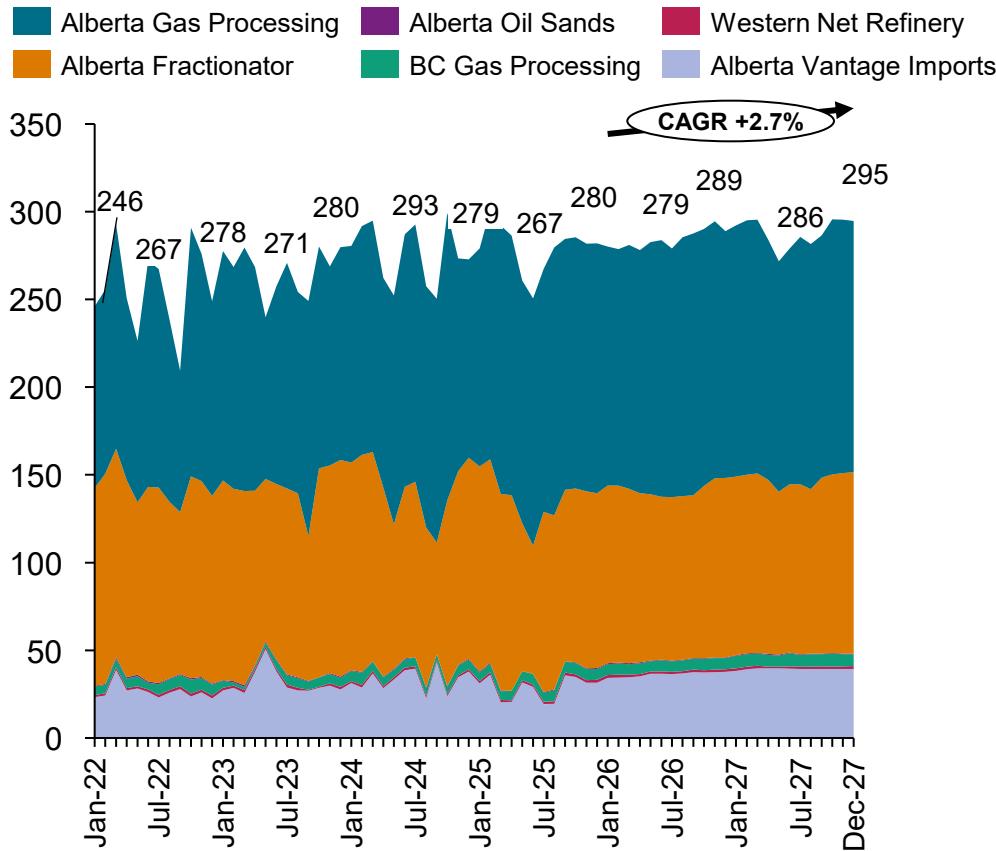
Data compiled October 31, 2025.

Note: Supply excludes net inventory changes.

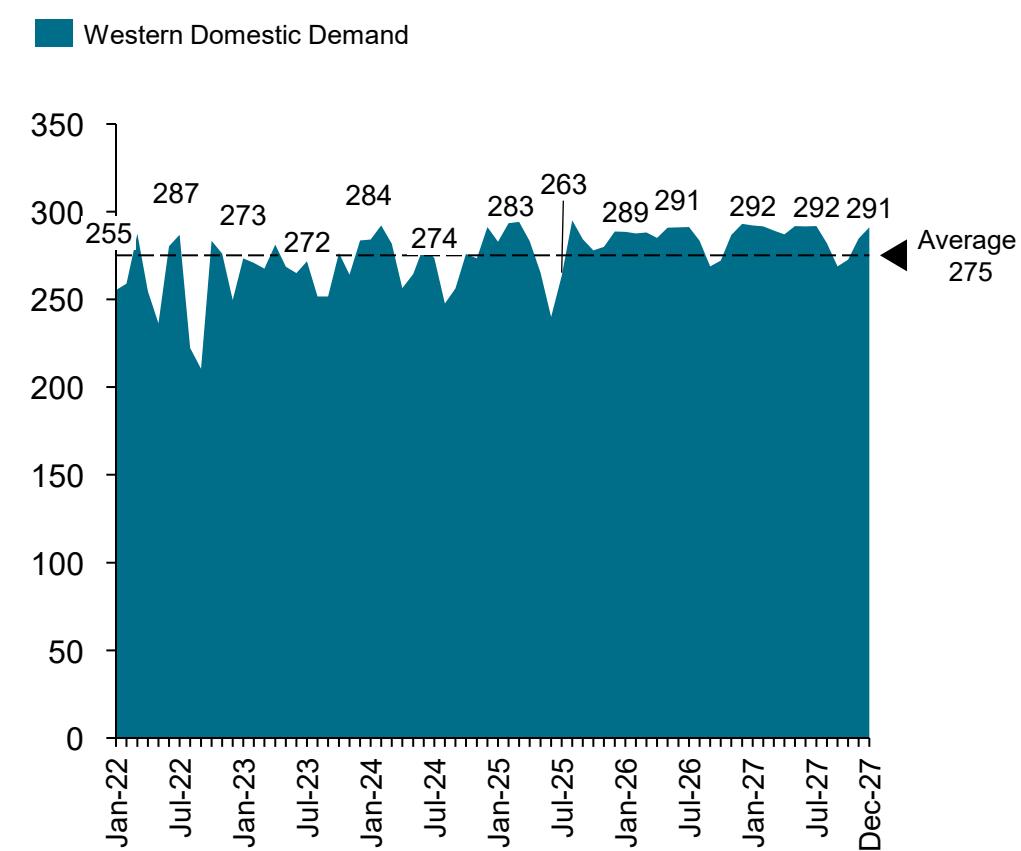
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Ethane production in Western Canada is anticipated to remain fairly steady, constrained by local demand as the market lacks export capabilities

Western Canada ethane supply outlook (Thousand b/d)



Western Canada ethane demand outlook (Thousand b/d)



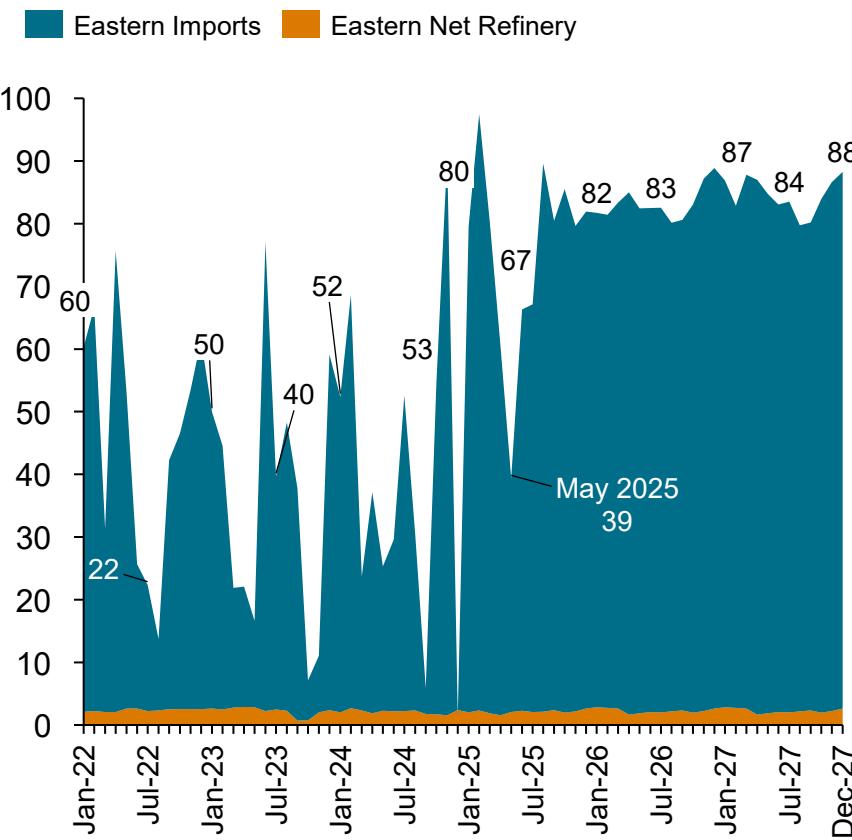
Data compiled October 31, 2025.

Notes: Compound Annual Growth Rate (CAGR) over the period of January 2026 to December 2027. Supply excludes net inventory changes. Outlook assumes ethylene crackers utilization is not necessarily 100% of nameplate capacity. Alberta Vantage imports include Saskatchewan production.

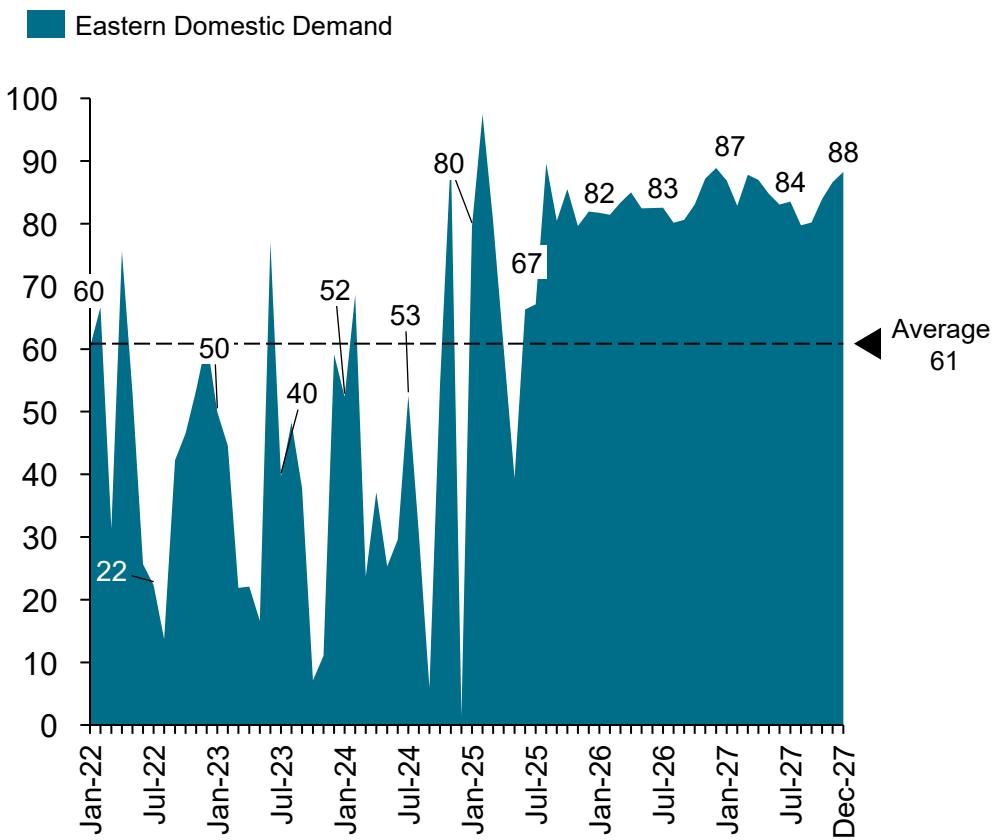
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Eastern Canada ethane consumption is anticipated to increase and remain relatively stable in 2026 and 2027

Eastern Canada ethane supply outlook (Thousand b/d)



Eastern Canada ethane demand outlook (Thousand b/d)



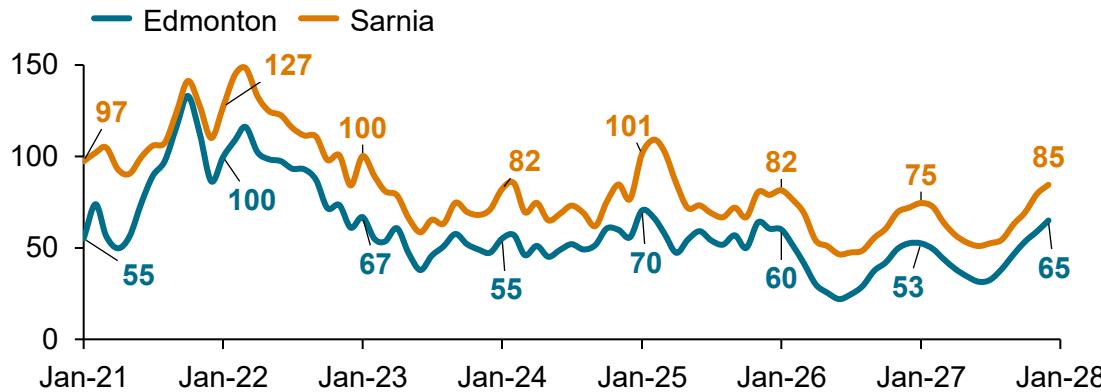
Data compiled October 31, 2025.

Notes: Supply excludes net inventory changes. Outlook assumes ethylene crackers utilization is not necessarily 100% of nameplate capacity.

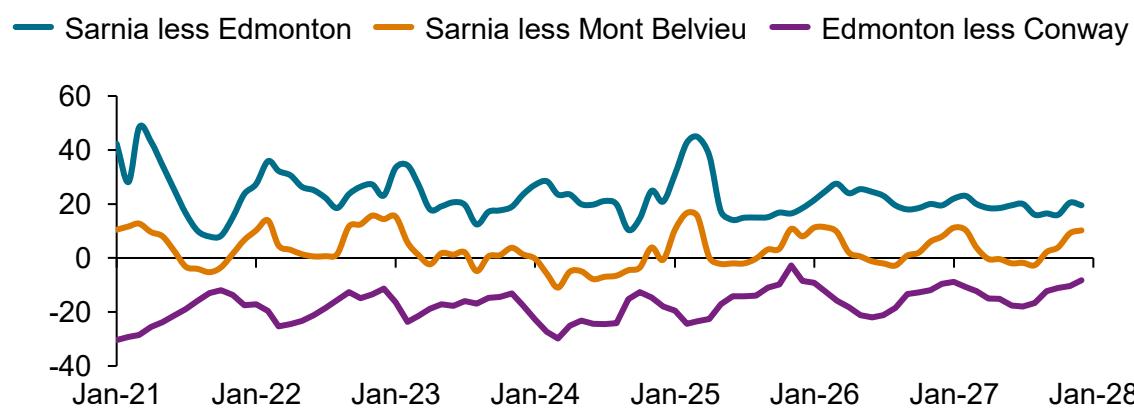
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Edmonton propane prices declined in October, along with crude oil benchmark NGL prices in the US

Canada propane price forecast (uscpg)



Canada and US propane price differentials (uscpg)



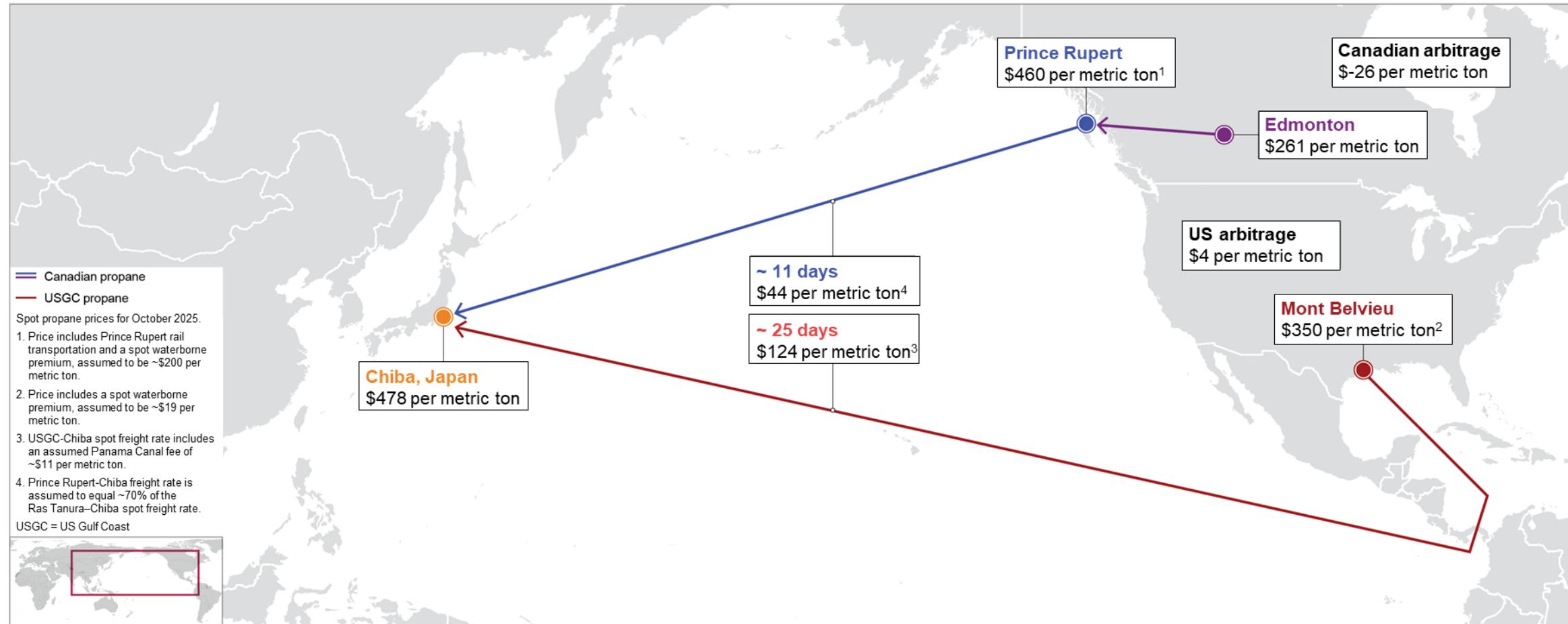
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights. As of June 2025, the price quotes are from S&P Platts

- In October, propane prices in Edmonton decreased from 57 uscpg to 50 uscpg, closely following the decline in US benchmark prices and crude oil values.
- The discount of Edmonton propane compared to Conway narrowed from 11 uscpg to 9.5 uscpg in October, indicating some optimism as the heating season starts.
- Limited heating demand growth in North America, combined with a tighter arbitrage to Asia, has pushed US inventories to a new high of over 105 million barrels, putting downward pressure on prices.
- Higher-than-anticipated production, largely driven by rising GORs in the Permian, continues to increase supply in the US, sustaining the pressure on prices.
- Canadian inventories remain below the five-year average, which may help support prices.
- Prices in Sarnia also declined, dropping from 72 uscpg to 67 uscpg in October.

Although shipping costs eased the comparatively lower prices in Asia for October eliminated the spot arbitrage opportunity for Canadian propane

USGC and Canadian propane export terminal prices



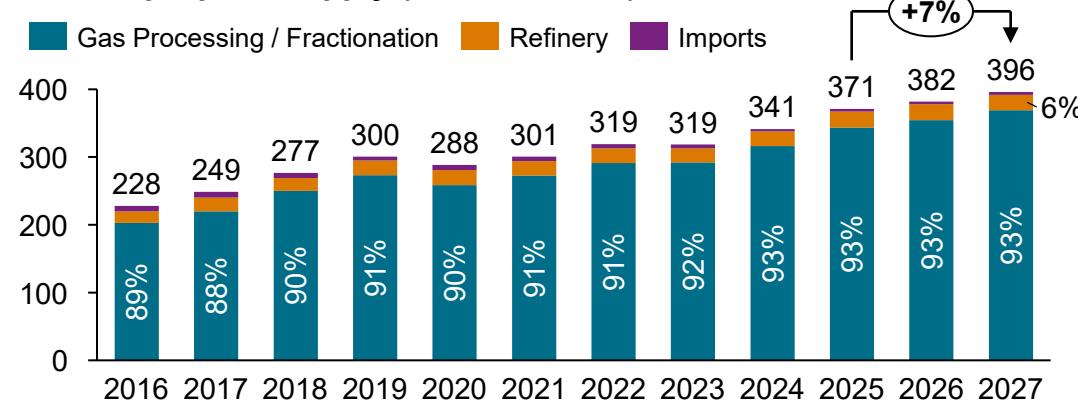
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights: C-2012252

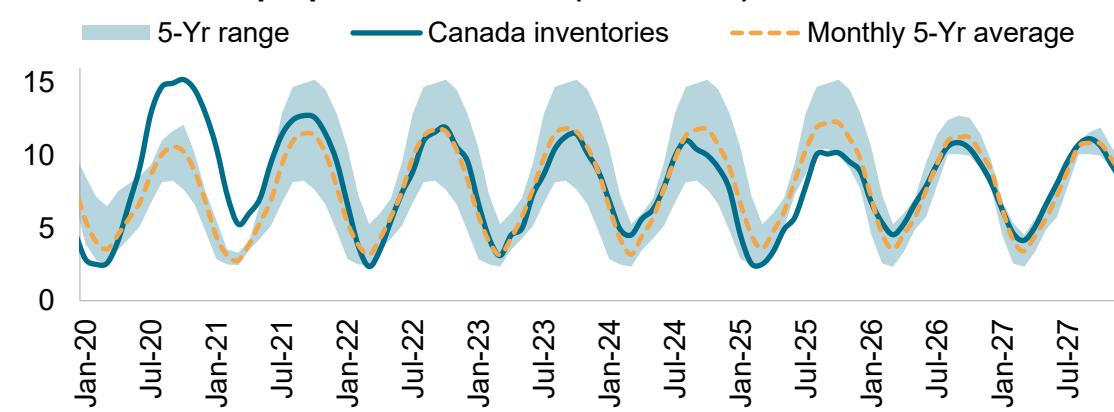
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In August, propane production in Canada fell, but the total Canadian inventory level remained relatively stable in September, but still below historic average levels

Canada propane supply (Thousand b/d)



Total Canadian propane inventories (Million bbl)



- In July, Canadian propane production decreased to approximately 372,800 b/d, down from 380,100 b/d reported in the prior month, marking a slight decrease. The average Canadian propane output for 2024 was around 334,600 b/d, while production in 2025 has so far averaged approximately 364,600 b/d.
- In September 2025, propane inventories remained relatively stable, increasing by only 26 thousand barrels, reflecting a total inventory level of around 10.1 million barrels. In the prior year, inventory levels peaked in August at nearly 11.0 million barrels before declining to a low of about 2.51 million barrels in March, resulting in a total drawdown of around 8.52 million barrels. Historically, September has averaged an inventory increase of about 273 thousand barrels over the past three years. Current levels also remain approximately 2.1 million barrels below the five-year average of around 12.2 million barrels for this time of year.
- In Eastern Canada, inventories fell by almost 95,000 barrels, while the Western region saw an increase of around 121,000 barrels. Traditionally, Eastern inventories have increased by about 211,000 barrels, and Western inventories have typically risen by around 63,000 barrels compared to the monthly average over the last three years.
 - Despite the strong build in Western inventories during September, levels are approximately 464,000 barrels below average, while Eastern inventories remain below the five-year historical average by about 1.6 million barrels.

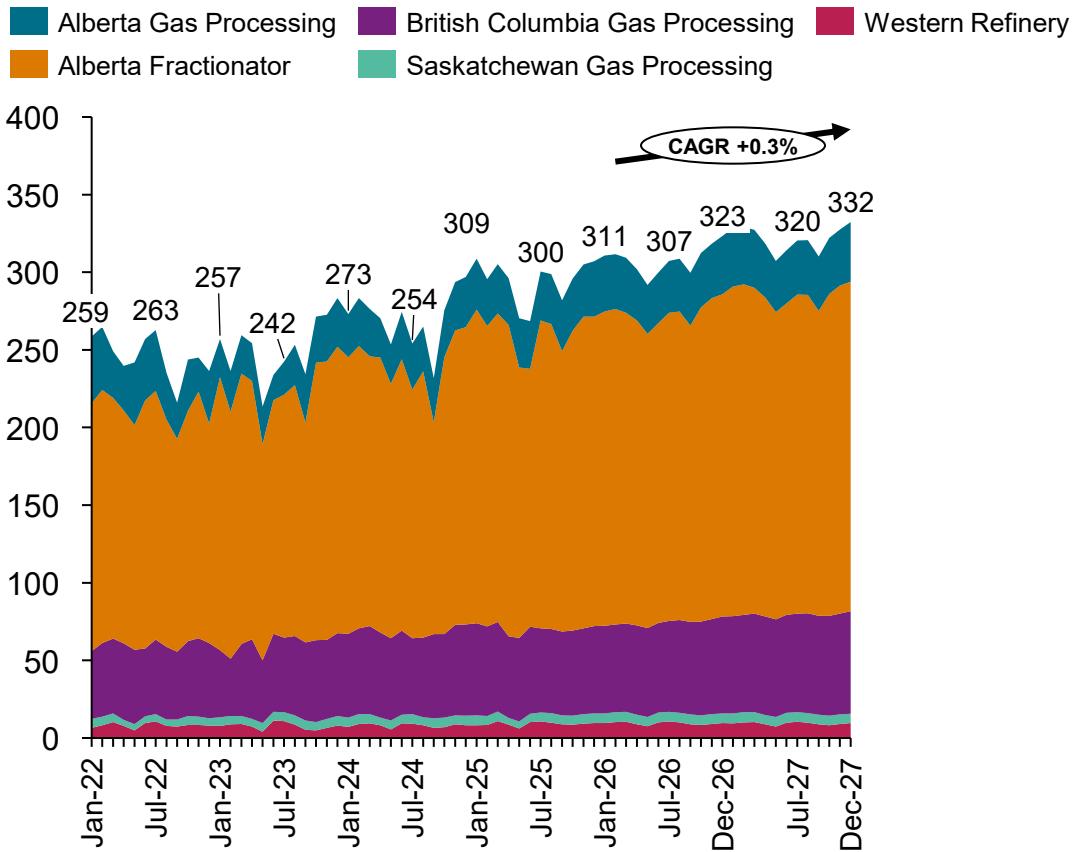
Data compiled October 31, 2025.

Note: Supply excludes net inventory changes.

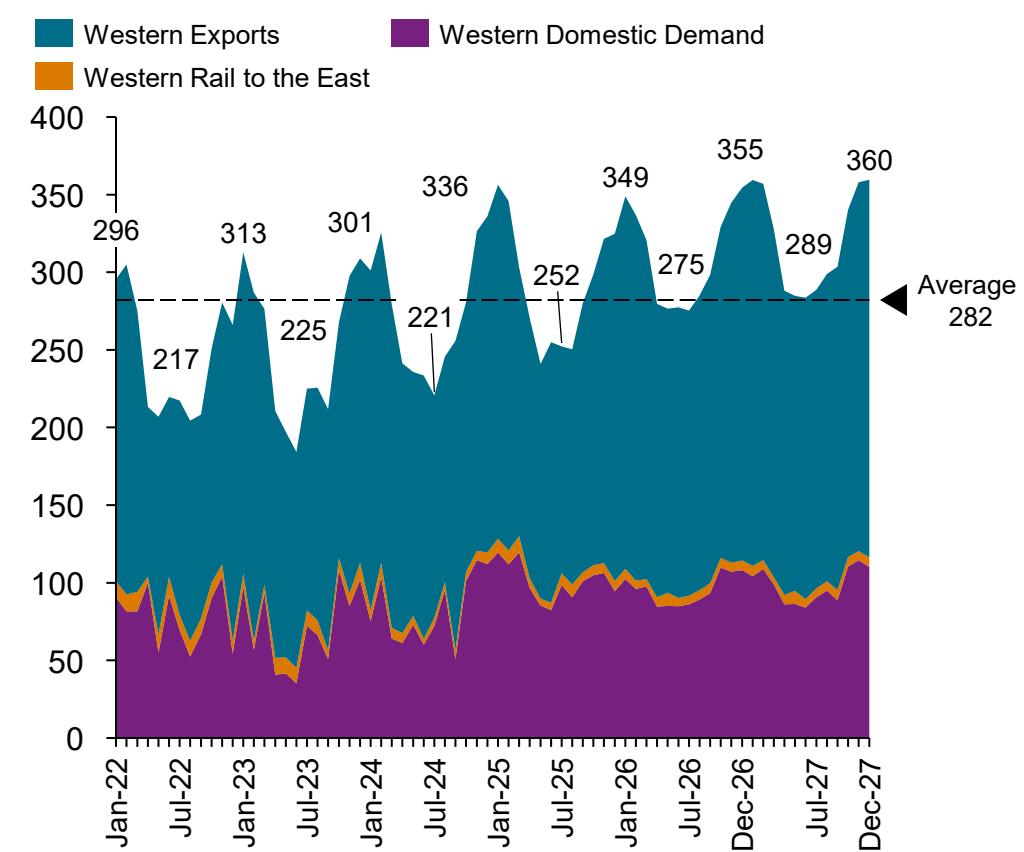
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Propane production in Western Canada is projected to increase, leading to higher export volumes, while domestic consumption is expected to stay relatively stable

Western Canada propane supply outlook (Thousand b/d)



Western Canada propane demand outlook (Thousand b/d)



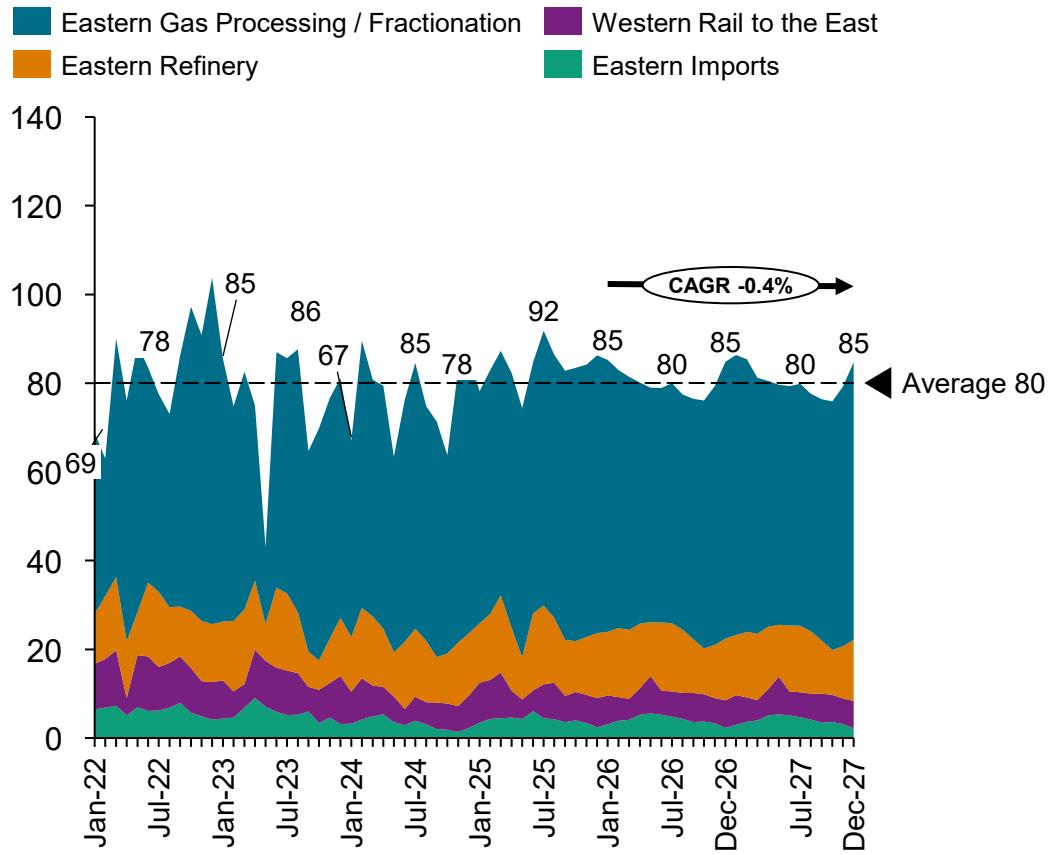
Data compiled October 31, 2025.

Notes: Compound Annual Growth Rate (CAGR) over the period of January 2026 to December 2027. Supply excludes net inventory changes.

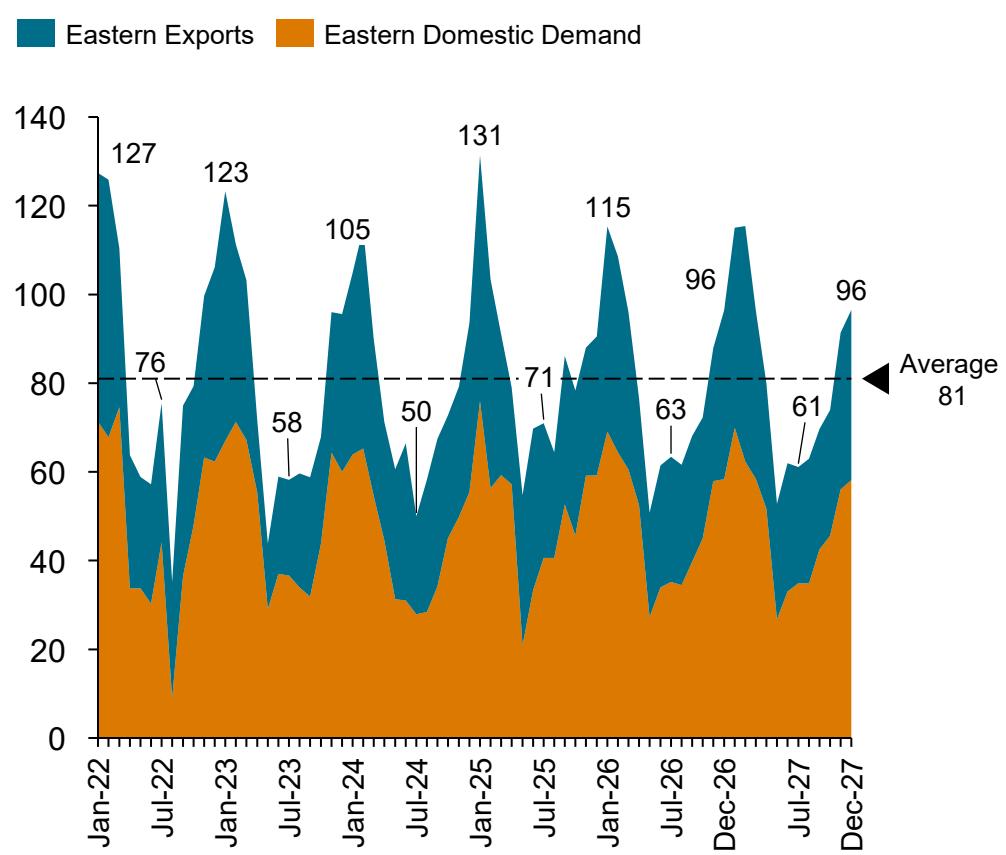
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

The propane market in Eastern Canada is expected to remain stable, as flows into the market for fractionation are anticipated to closely align with local demand

Eastern Canada propane supply outlook (Thousand b/d)



Eastern Canada propane demand outlook (Thousand b/d)



Data compiled October 31, 2025.

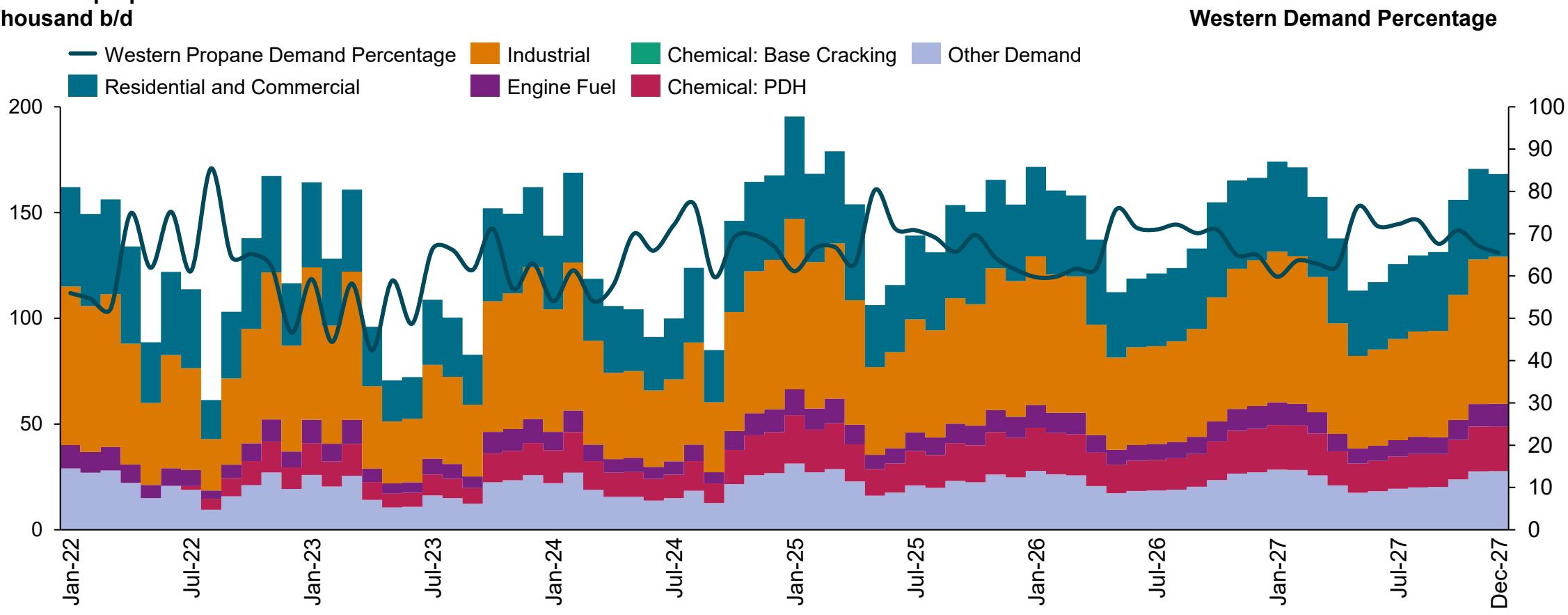
Notes: Compound Annual Growth Rate (CAGR) over the period of January 2026 to December 2027. Supply excludes net inventory changes.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

In Canada, the primary drivers of propane demand are the residential, commercial, and industrial sectors, with additional usage as a petrochemical feedstock

Canadian propane domestic demand breakout

Thousand b/d



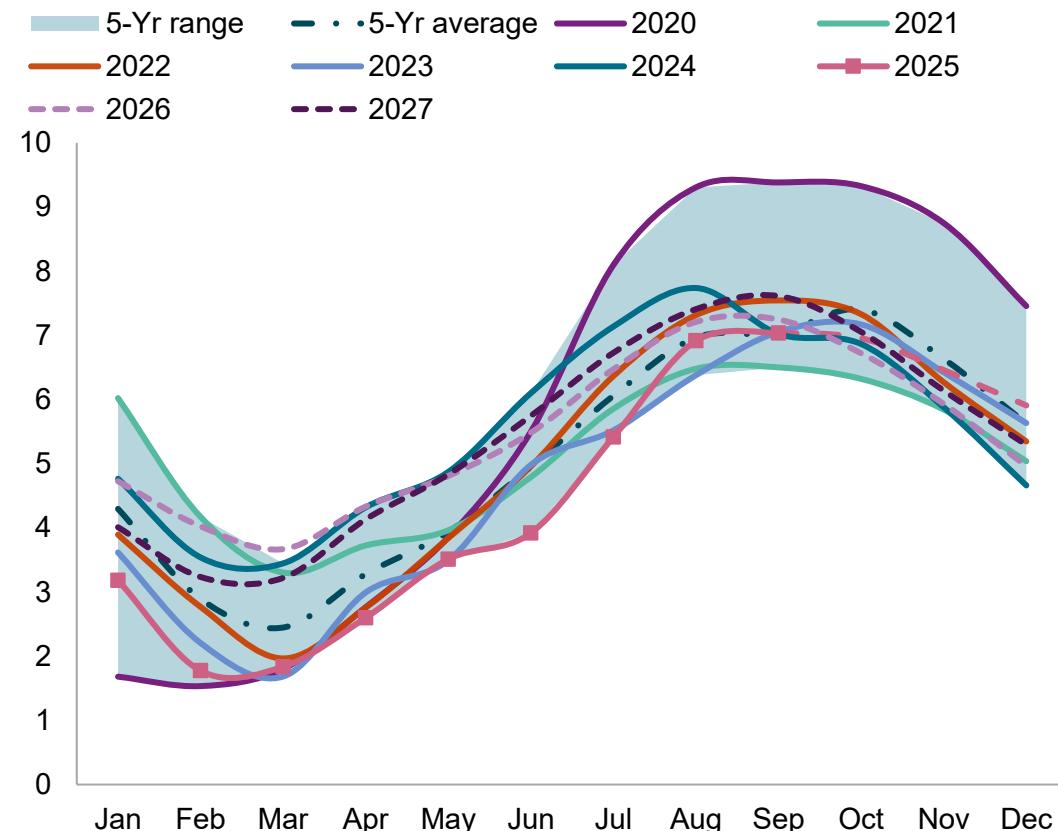
Data compiled October 31, 2025.

Notes: Estimated domestic demand split based on the 2025 ASW analysis and assumed US demand seasonality factors. Industrial demand includes solvent use. Res/Com = Residential and Commercial. PDH = Propane Dehydrogenation.

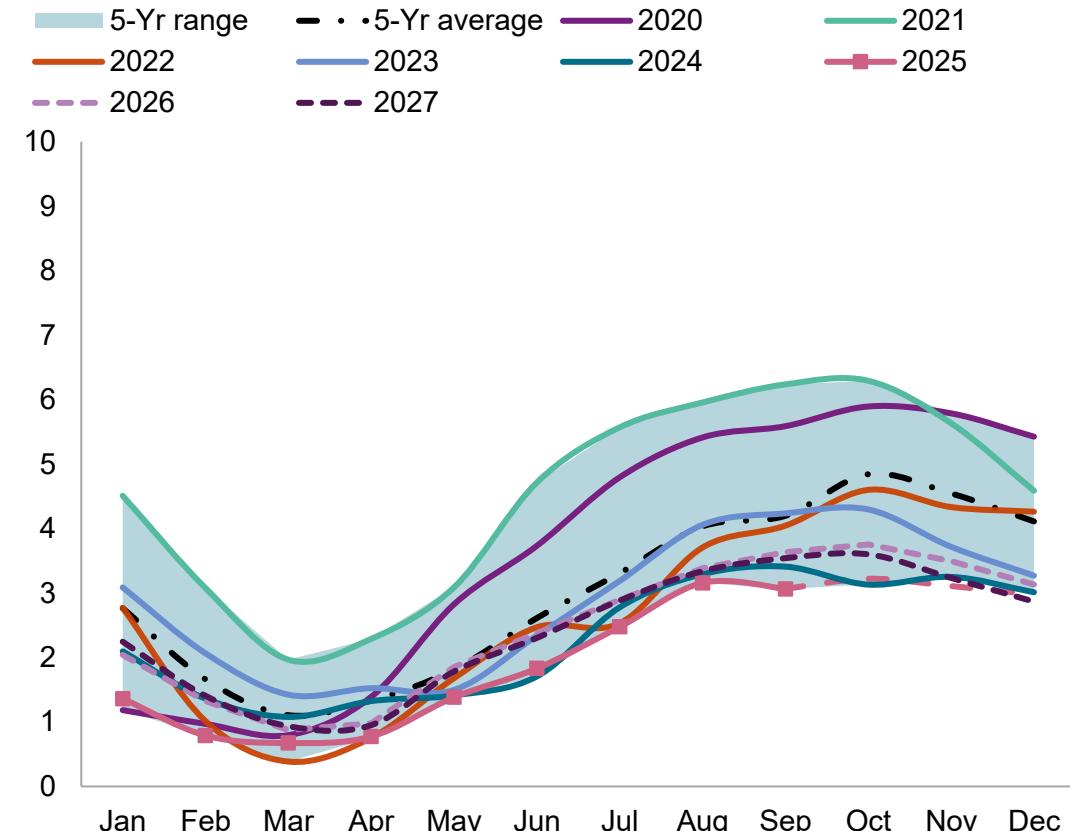
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

In September, Western inventories stabilized while Eastern inventories slightly declined, with overall levels remaining below historical averages

Western Canada propane inventories (Million bbl)



Eastern Canada propane inventories (Million bbl)

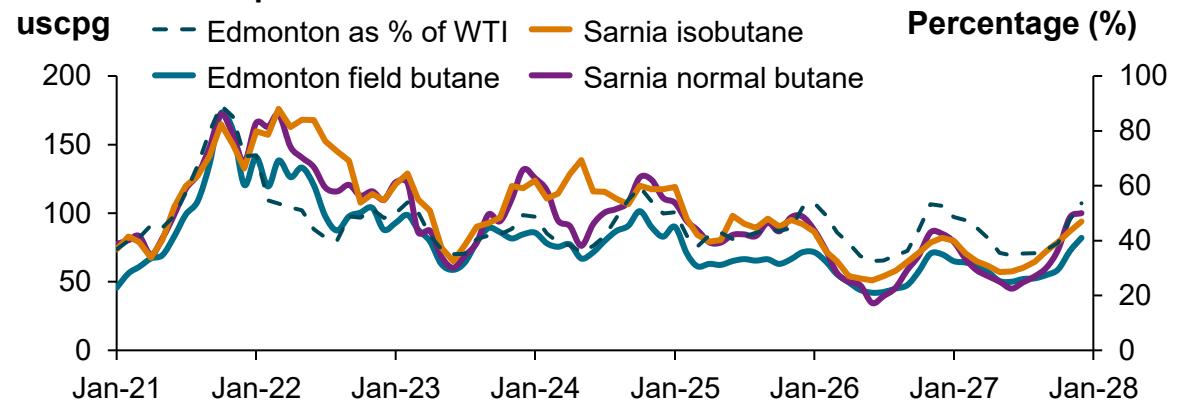


Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

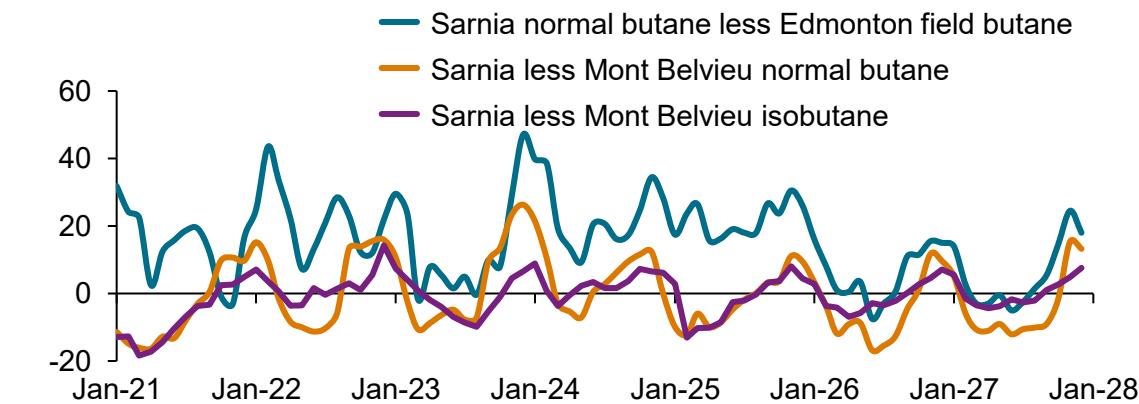
Edmonton butane prices fell in October, along with crude oil prices, as above average inventory levels continue to exert downward price pressure

Canada butane price forecast



- In October, field butane prices in Edmonton declined from 66 uscpg to 63 uscpg.
- The ratio compared to WTI crude oil remained essentially unchanged at 43.7%. With forecasts indicating lower crude oil prices throughout 2026, absolute butane prices are expected to decrease.
- Butane inventories in both Canadian regions continue to be above the historical five-year averages. As the blending season progresses, seasonal reductions in stockpiles are anticipated. Prices are projected to peak in January 2026 at 53.7% of the WTI crude oil price.
- Sarnia butane prices saw a significant decrease in October, influenced by lower USGC prices, dropping from 93 uscpg in September to 88 uscpg in October.
- Likewise, Sarnia iso-butane prices declined by six uscpg in October, mirroring the decrease observed in Mont Belvieu prices.

Canada and US butane price differentials (uscpg)

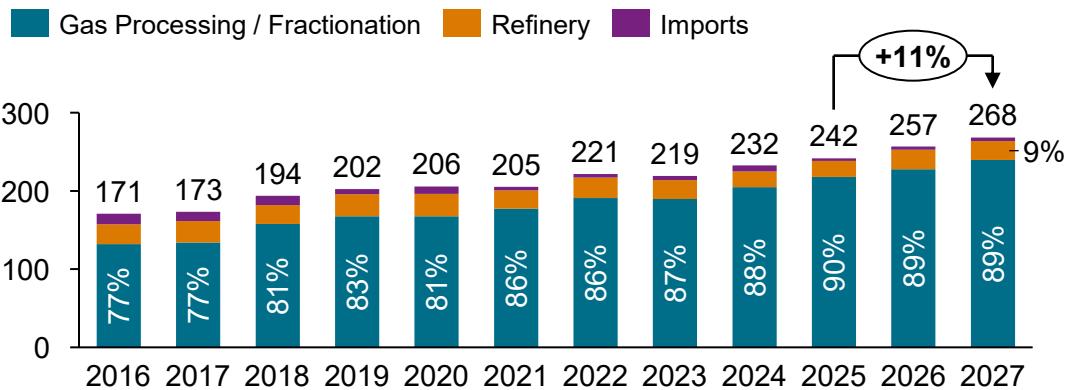


Data compiled October 31, 2025.

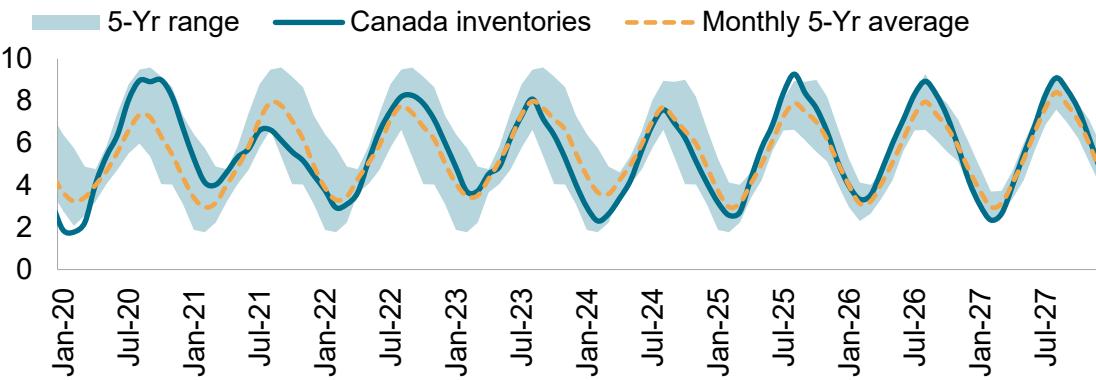
Sources: S&P Global Commodity Insights. As of June 2025, the price quotes are from S&P Platts

Canadian butane production continued to increase in August, while inventories began to decline, having marked one of the strongest build seasons in recent years

Canada butane supply (Thousand b/d)



Total Canadian butane inventories (Million bbl)



- In August, Canadian butane production rose to approximately 240,200 b/d, up from almost 237,000 b/d reported in the previous month. For 2023, the average domestic butane production rate was about 216,500 b/d, slightly lower than the 217,600 b/d recorded in 2022. However, in 2024, production rose to approximately 221,500 b/d, and so far in 2025, it averages at nearly 240,700 b/d.
- In September 2025, Canadian butane stocks decreased to 8.36 million barrels, reflecting a draw of nearly 910,000 barrels, a similar magnitude as the build that was reported last month of just under 900,000 barrels. Typically for the month of September, butane sees a draw of around 504,000 barrels based on the three-year average for this month. This year, Canadian butane inventories peaked in August at around 9.27 million barrels, compared to a peak of around 7.58 million barrels reported during August 2024. With robust builds over the past few months, butane inventories remain well above the historical five-year average of approximately 7.48 million barrels for September, exceeding it by about 1.4 million barrels.
 - In August, Eastern Canada saw inventory growth of approximately 194,000 barrels, while Western Canada experienced a significant increase of about 703,000 barrels. Compared to the three-year average, Eastern inventories typically see a build of about 482,000 barrels, while Western inventories generally experience a build of over 261,000 barrels.

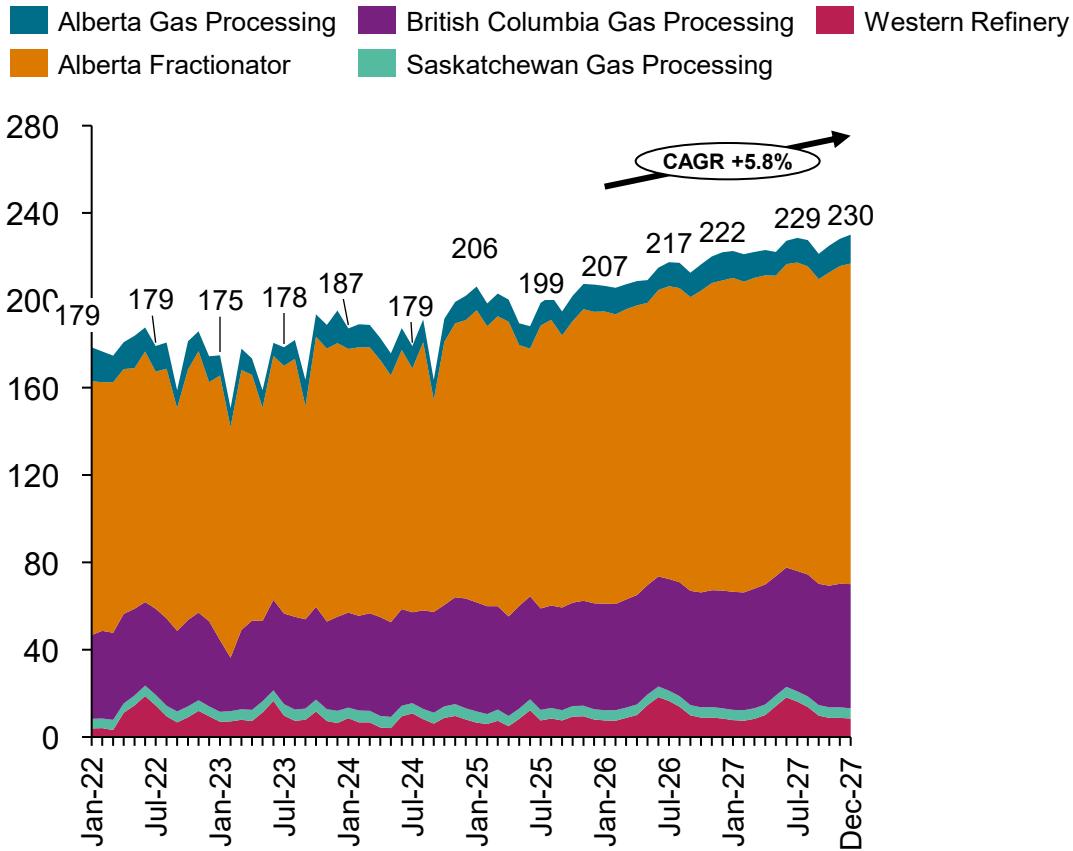
Data compiled October 31, 2025.

Note: Supply excludes net inventory changes.

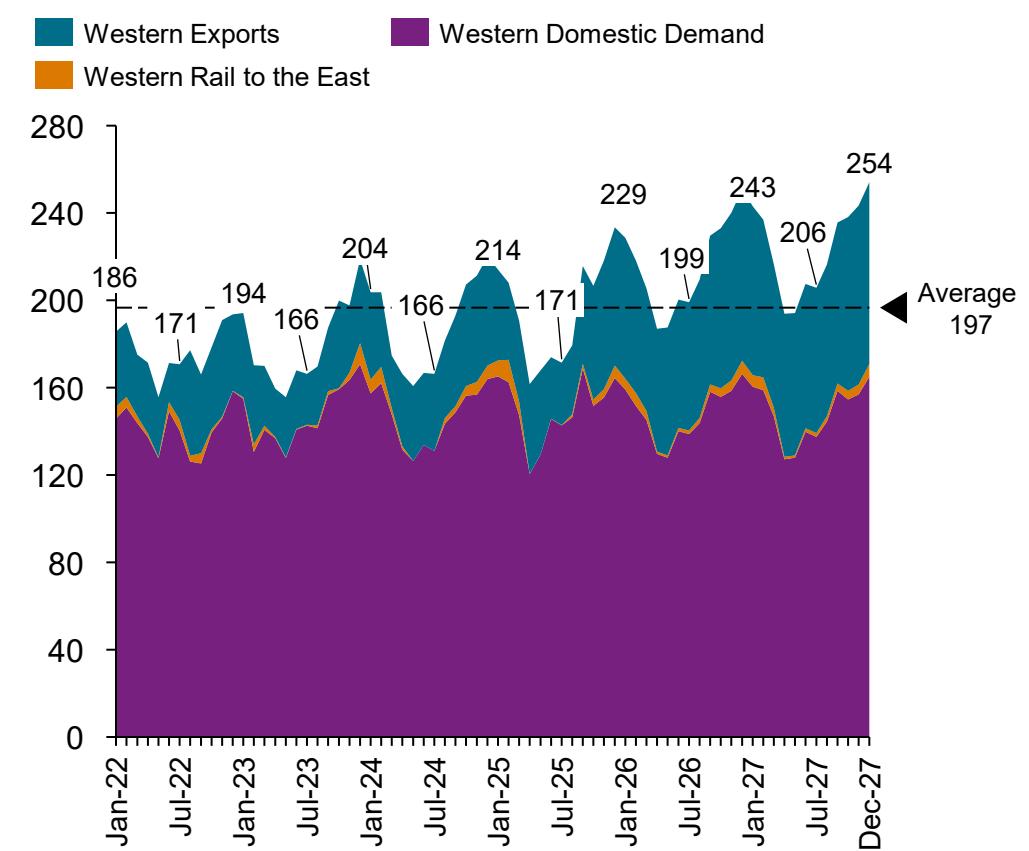
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

In Western Canada, a rise in butane production will help drive stronger exports, whereas domestic consumption is likely to stay relatively steady

Western Canada butane supply outlook (Thousand b/d)



Western Canada butane demand outlook (Thousand b/d)



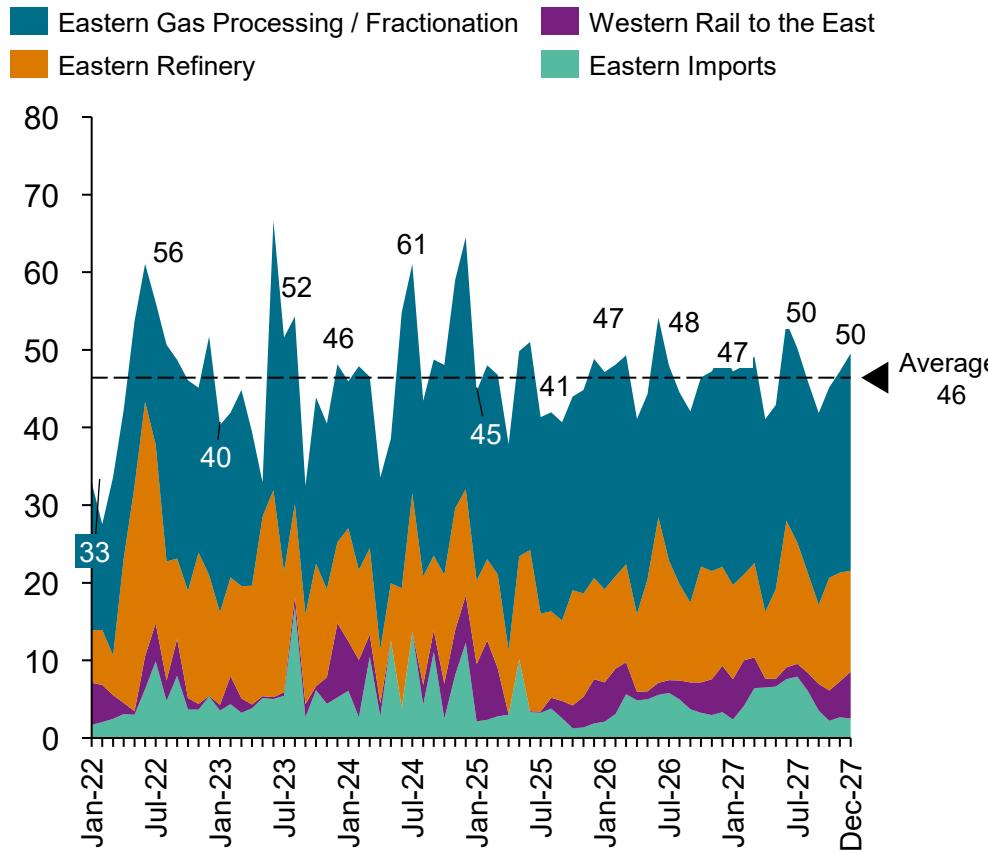
Data compiled October 31, 2025.

Notes: Compound Annual Growth Rate (CAGR) over the period of January 2026 to December 2027. Supply excludes net inventory changes.

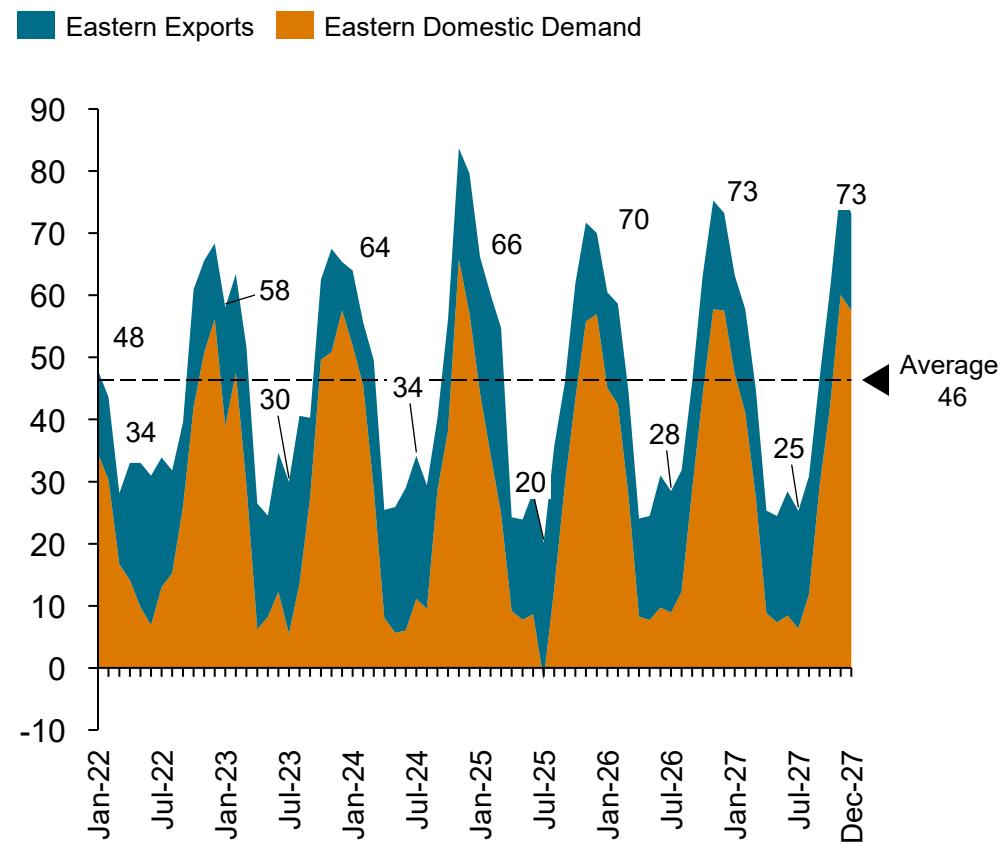
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Eastern Canada is projected to experience consistent domestic demand for butane, leading to a more stable market throughout the forecast period

Eastern Canada butane supply outlook (Thousand b/d)



Eastern Canada butane demand outlook (Thousand b/d)

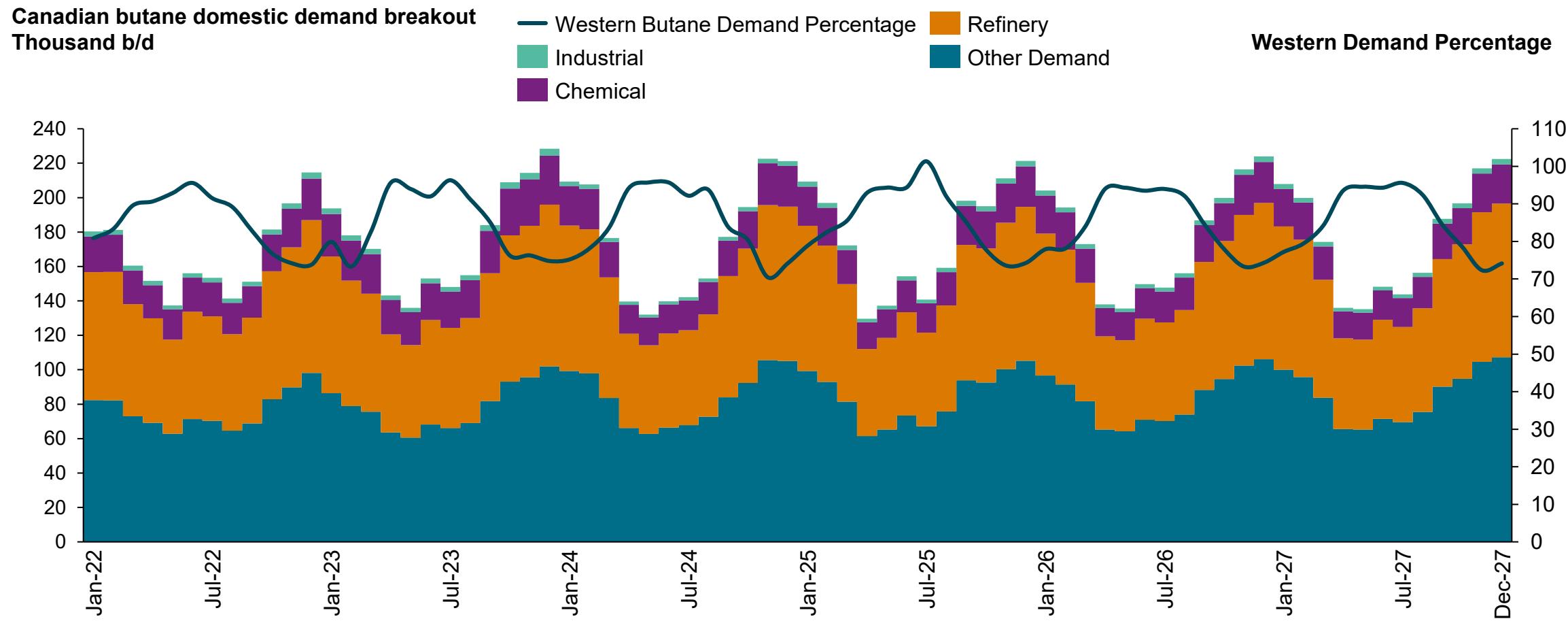


Data compiled October 31, 2025.

Note: Supply excludes net inventory changes.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Canadian butane is mainly utilized within the country for blending with gasoline, manufacturing iso-octane, and blending with the diluent pool and crude steams



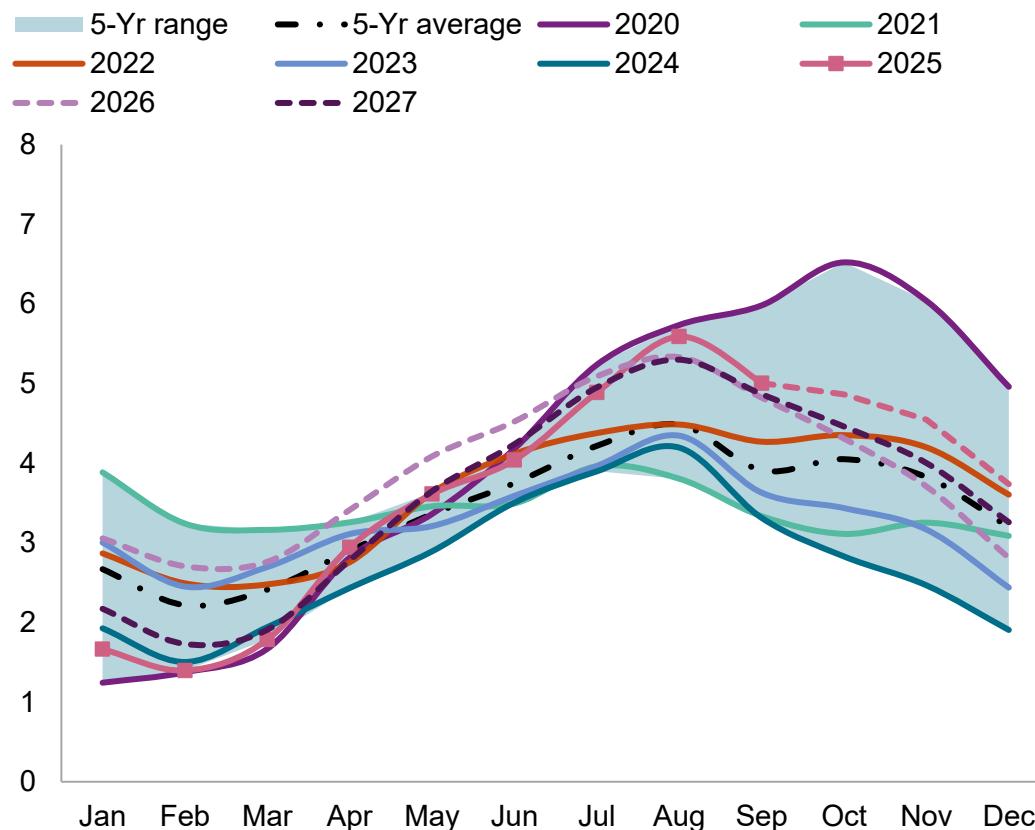
Data compiled October 31, 2025.

Notes: Estimated domestic demand split based on the 2025 ASW analysis and assumed US demand seasonality factors. Chemical demand includes estimated iso-octane demand based on AEF facility capacity and assumed operating rates. Industrial demand is equal to producer consumption. Other demand includes diluent demand, as well as other non-energy uses such as crude oil blending.

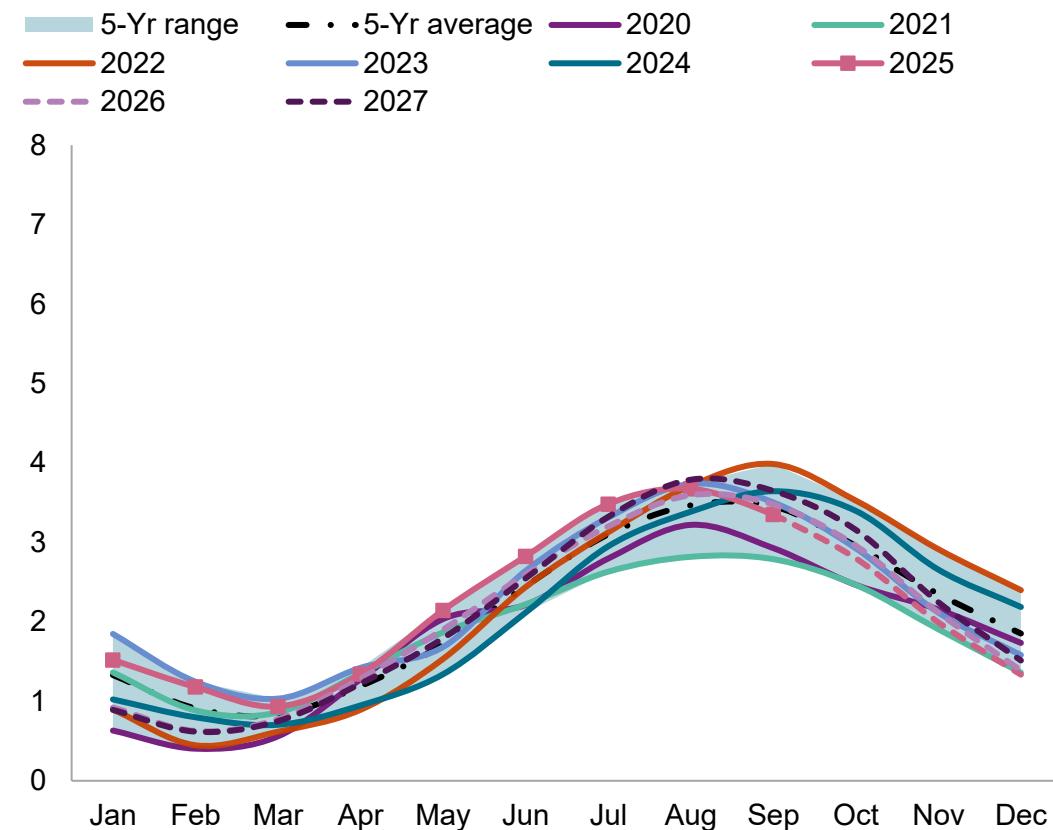
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

In September, Canadian butane inventories decreased in both Eastern and Western Canada, while inventories remain above the historic average levels

Western Canada butane inventories (Million bbl)



Eastern Canada butane inventories (Million bbl)

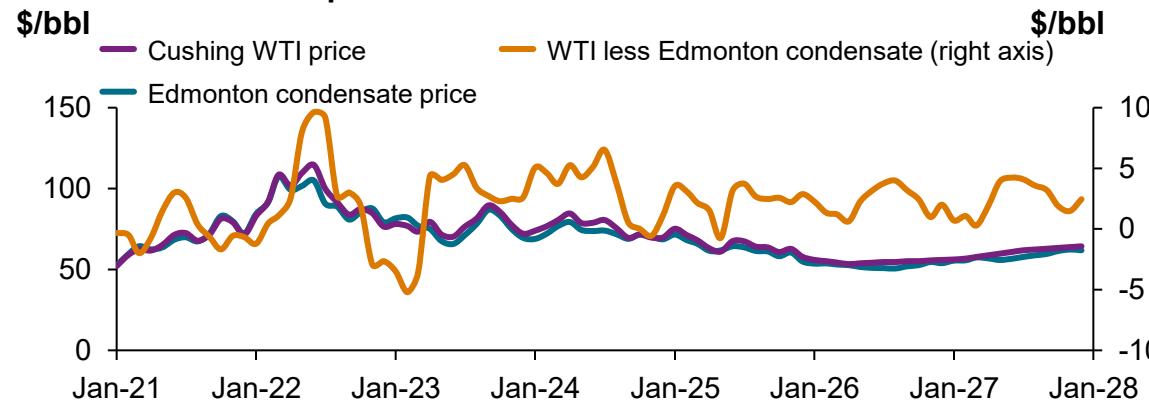


Data compiled October 31, 2025.

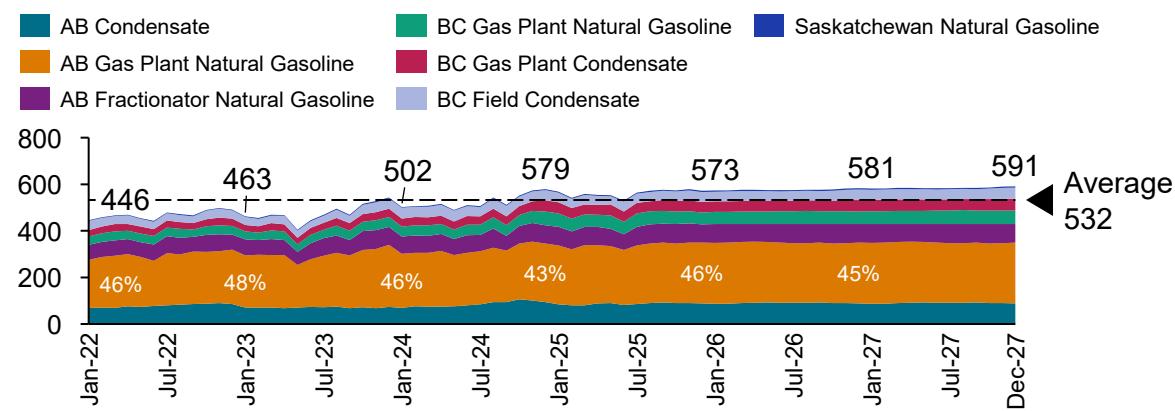
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

Canadian condensate prices lower in October; With the large drop in crude oil prices forecast, absolute prices are expected to fall throughout 2026

Canada condensate price forecast



Western Canada diluent production outlook (Thousand b/d)



Data compiled October 31, 2025.

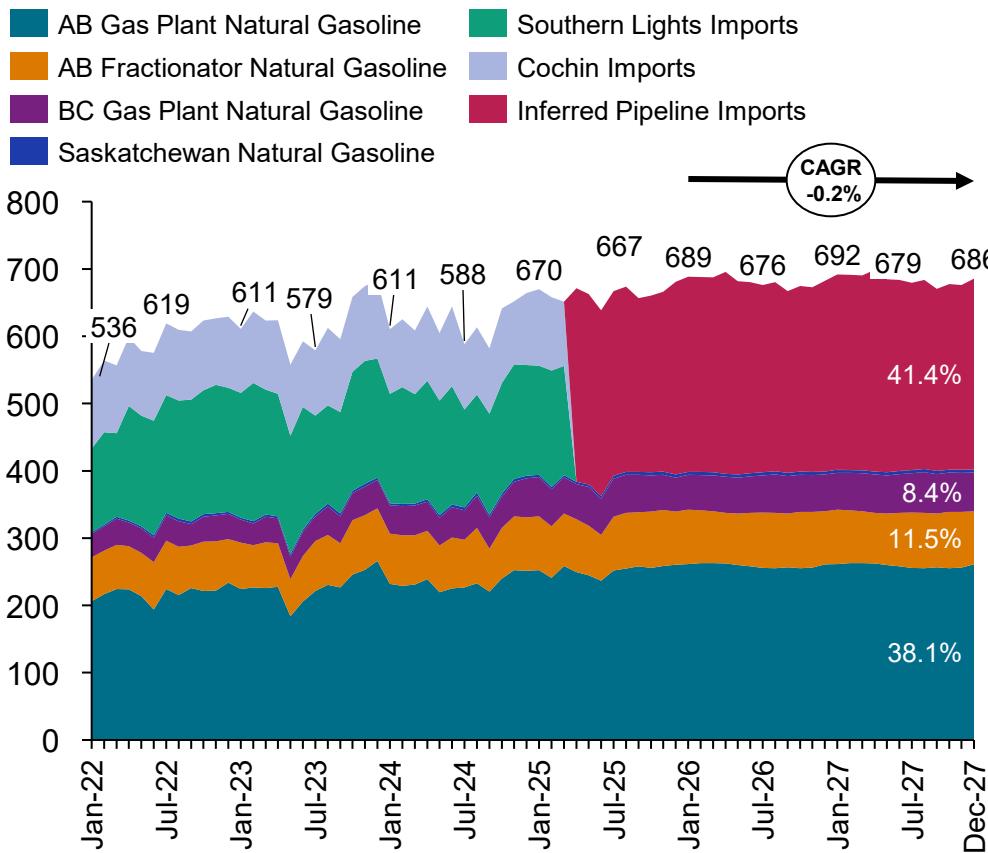
Notes: AB = Alberta, BC = British Columbia. Diluent production includes both natural gasoline and condensate production.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan

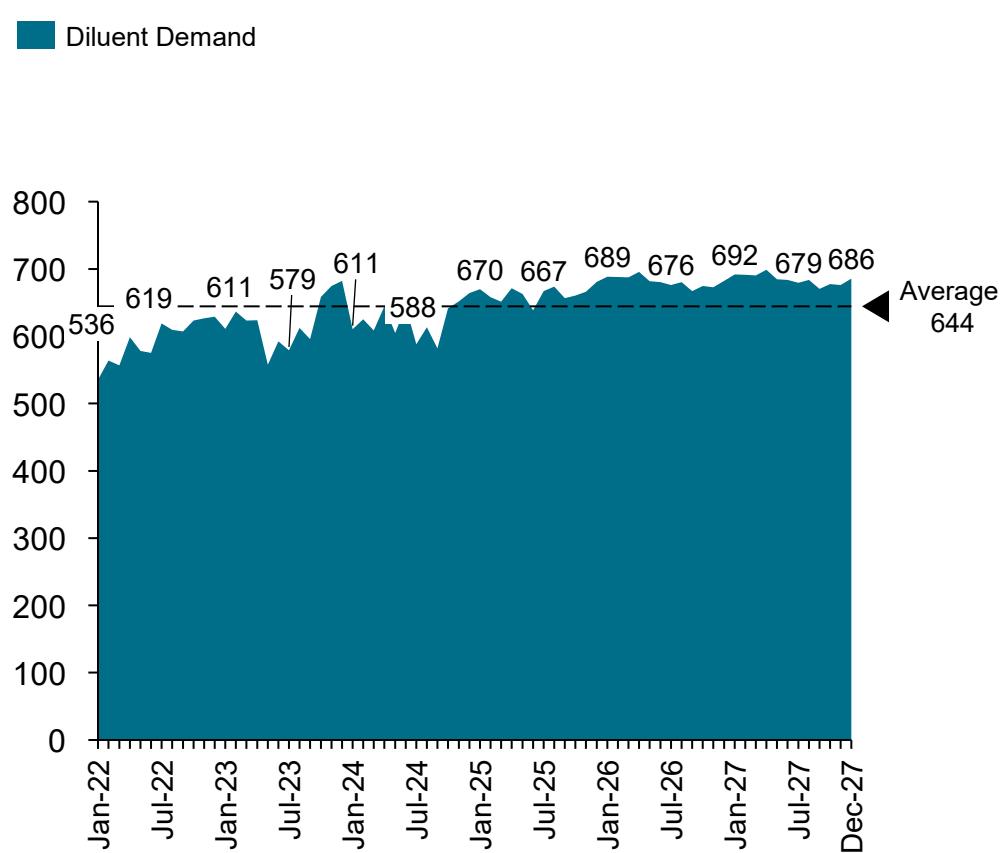
- In October, the price of Edmonton condensate decreased by just under 3 dollars, primarily due to the decline in crude prices for the month. We anticipate that condensate will maintain an average discount of \$2.27 per barrel through 2026.
- In August 2025, the production of condensate and natural gasoline was estimated at approximately 577,000 b/d, from the 562,000 b/d reported in the previous month. Alberta's production for August 2025 reached around 427,000 b/d. So far in 2025, the average production of natural gasoline and condensate is estimated at around 555,000 b/d.
- In British Columbia, the reported production for June was approximately 139,000 b/d, a slight decrease from the previously reported 140,000 b/d. In 2023, British Columbia's average production was around 104,000 b/d, which rose to approximately 128,000 b/d in 2024. In the first half of 2025, the average production rate for British Columbia has been around 140,000 b/d.
- Compared to August of the previous year, total Canadian production of natural gasoline and condensate in 2025 is estimated to be higher by nearly 34,000 b/d.
- The S&P Global Commodity Insights [Canadian Condensate Market Dashboard](#) provides quarterly updates on the diluent market in Western Canada. This dashboard provides a unique combination of datasets and outlooks, including diluent supply, demand, price, and condensate stream quality trends. The latest dashboard release (Q2 2025) was published on August 7, 2025.

Canada's domestic gasoline production is projected to increase alongside natural gas output, whereas imports from the US are expected to stay consistent

Western Canada natural gasoline supply outlook (Thousand b/d)



Western Canada natural gasoline demand outlook (Thousand b/d)



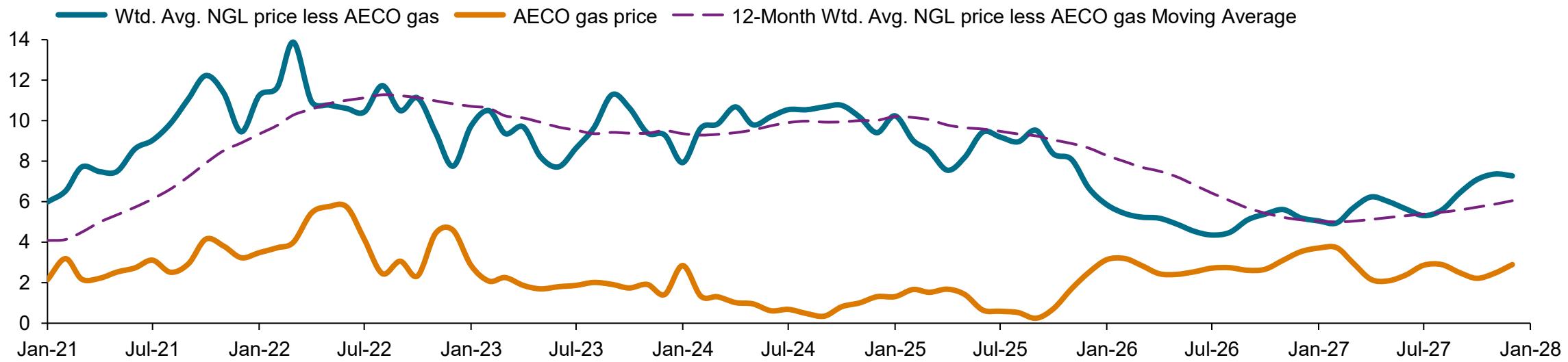
Data compiled October 31, 2025.

Notes: Compound Annual Growth Rate (CAGR) over the period of January 2026 to December 2027. Supply excludes net inventory changes. Does not include natural gasoline production and imports for refineries and petrochemical facilities in Eastern Canada. Inferred Pipeline Imports based on latest short-term Canadian oil sands diluent demand balance and does not include possible rail movements. Natural gasoline supply outlook does not include condensate production.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration, Federal Energy Regulatory Commission

With falling crude oil price forecasts and a higher AECO gas price throughout 2026, C3+ margins will be squeezed tighter than in the last few years

Alberta gas plant C₃+ gross margins (\$/MMBtu)



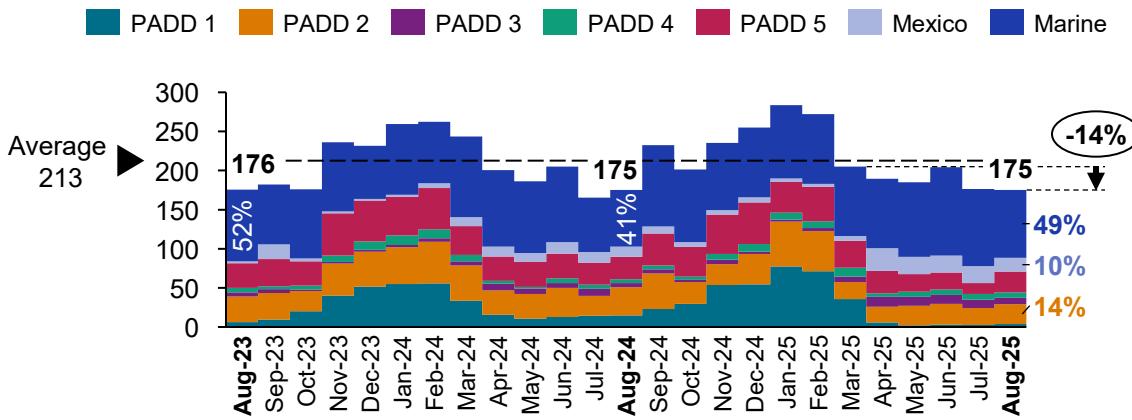
- October AECO-NIT prices rebounded from September's lows (negative pricing was observed late in the month) because of fewer pipeline maintenance restrictions and increased deliveries to LNG Canada, but they remain modest. Canadian storage inventories are forecast to reach the high levels of October 2024, which may be a headwind to winter prices. We anticipate that AECO-NIT will average 71 cents/MMBtu in October.
- Canadian storage facilities will be full at the end of October, but will be called upon this winter. Canadian inventories will reach 2024's high levels by the end of October, but lower production growth this winter means inventories will be drawn down significantly and will return near the five-year average by the end of March 2026.
- Our new short-term price outlook anticipates stronger AECO cash prices in 2026, which now average \$2.83/MMBtu — 17 cents higher than last month because of a slower ramp of Canadian production needed to meet rising LNG demand. Post-2026, AECO-NIT prices average 37 cents/MMBtu lower than our previous outlook because of slightly lower domestic demand in the US and more modest Henry Hub prices.

Data compiled October 31, 2025.

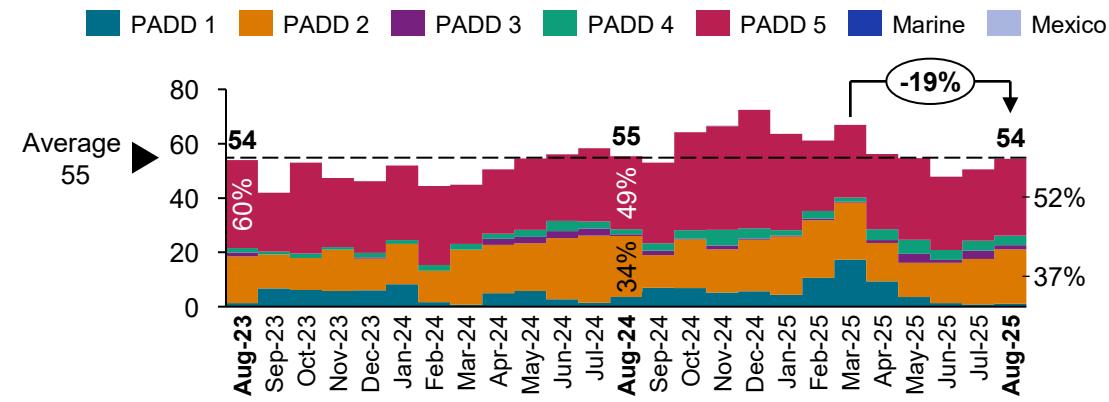
Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration, CME Group Inc

In August, Canadian propane exports decreased while butane exports rose; lower propane stocks in Eastern Canada have limited flows to PADD 1

Canada propane exports (Thousand b/d)



Canada butane exports (Thousand b/d)



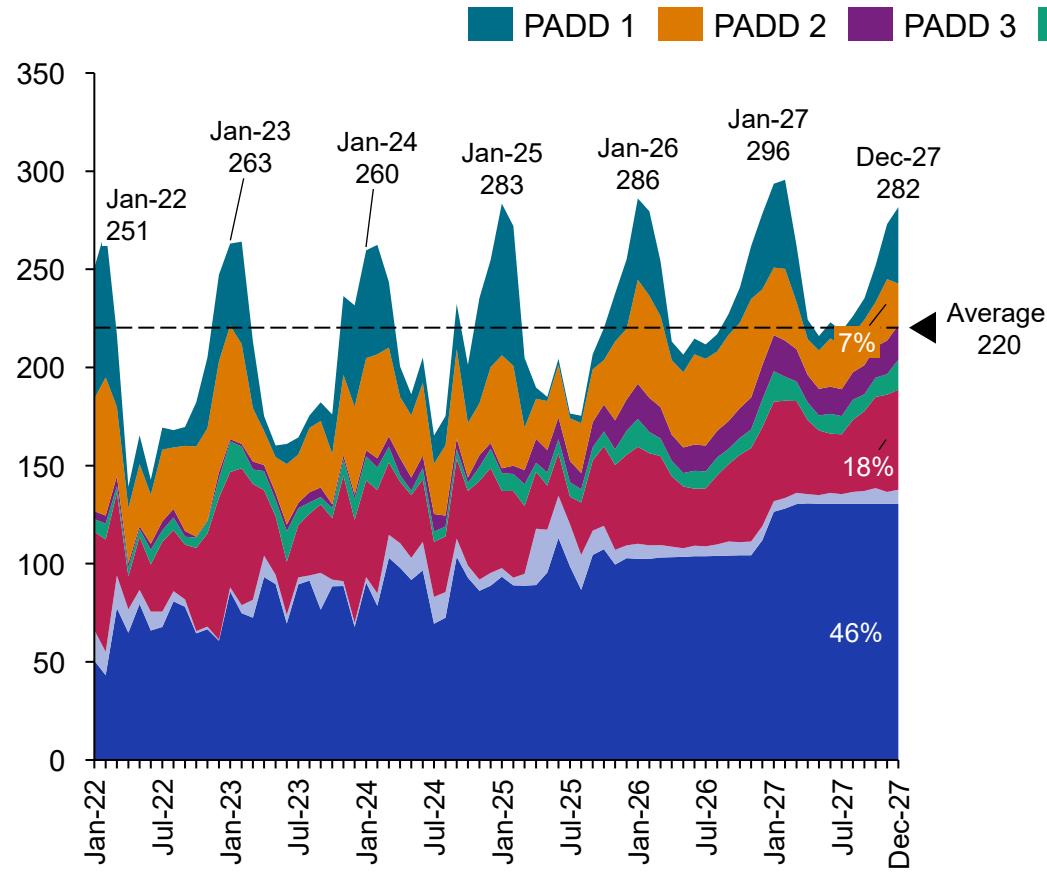
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights, Canada Energy Regulator, Energy Information Administration

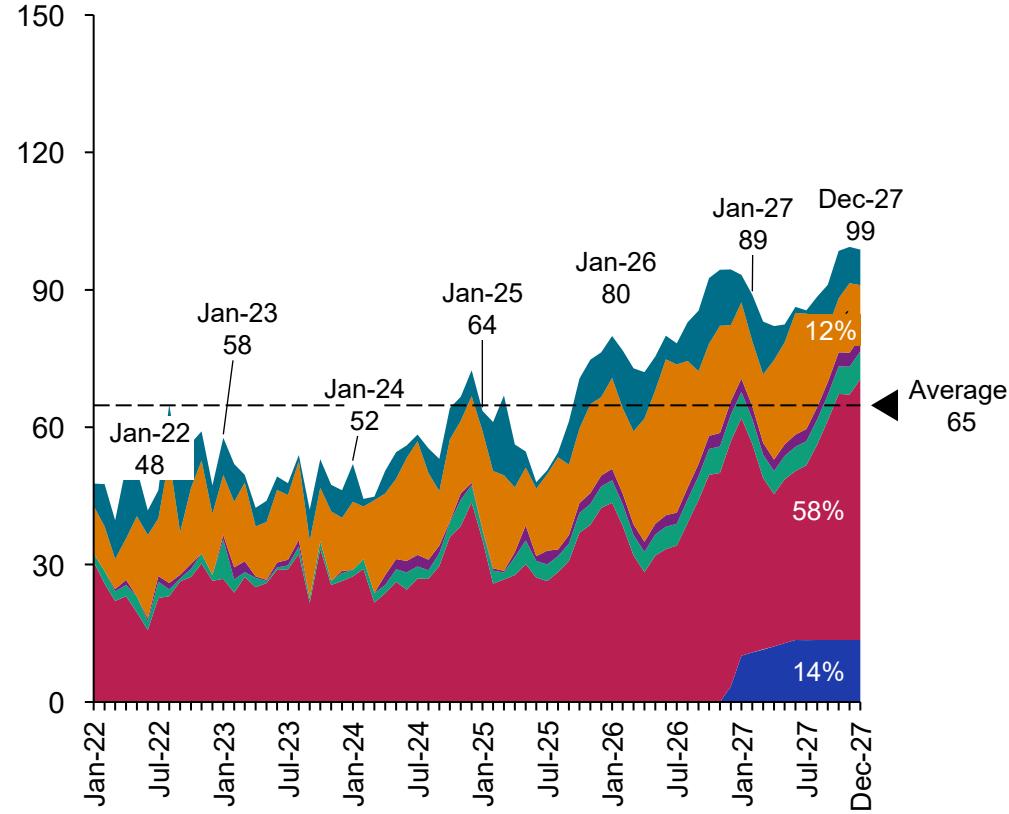
- In August 2025, Canadian propane exports decreased to approximately 175,300 b/d, marking a decline of about 1,100 b/d from the previous month. This seasonal drop is typical, as demand from the U.S. usually wanes during the spring and summer months due to the need for replenishing domestic inventories. Conversely, exports typically rise in the fall and winter months, driven by increased demand from colder temperatures.
 - In 2023, Canadian propane exports averaged over 200,000 b/d, an increase from approximately 194,000 b/d in 2022. Despite this growth, volumes remained below the 2021 average export rate, which exceeded 204,000 b/d. Propane exports rose to an average of around 218,500 b/d in 2024, and so far in 2025, they have averaged about 211,400 b/d.
- S&P Global estimates that marine export movements in October increased to about 107,300 b/d (approximately 268,000 metric tons), up from around 104,500 b/d (around 252,300 metric tons) reported the previous month. AltaGas' terminal loaded five vessels at a rate of roughly 97,800 b/d (approximately 244,000 metric tons), while Pembina's terminal loaded only two vessels, achieving a monthly rate of nearly 10,000 b/d (approximately 23,900 metric tons).
- In contrast, butane exports increased to around 54,500 b/d, compared to nearly 50,600 b/d reported the previous month. Although butane inventories remain well above historic average levels, the August butane export rate is comparable to the two-year average export rate of 55,000 b/d.
 - In 2021, butane exports averaged about 50,100 b/d, with a slight increase to around 50,300 b/d in 2022. However, exports in 2023 declined to an average of approximately 48,300 b/d. In 2024, butane exports rose to just over 56,000 b/d, and so far in 2025, the average butane export rate is around 57,000 b/d.

Canadian LPG exports are expected to grow as supply rises, with marine terminals running at full capacity and butane exports starting from the new REEF terminal

Canadian propane export outlook (Thousand b/d)



Canadian butane export outlook (Thousand b/d)



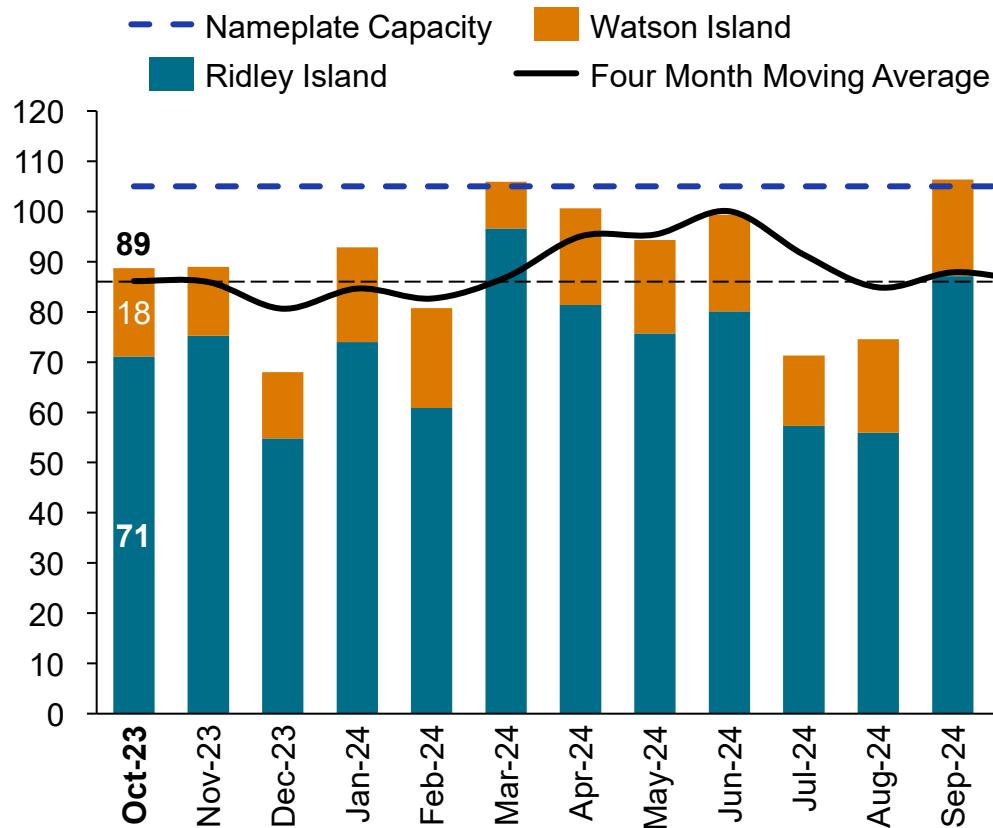
Data compiled October 31, 2025.

Note: Outlook assumes Canadian marine terminals will operate around 90% of nameplate capacity.

Sources: S&P Global Commodity Insights, Alberta Energy Regulator, Government of British Columbia, Government of Saskatchewan, Statistics Canada, Canada Energy Regulator, Energy Information Administration

In October, Canadian marine exports increased, totaling seven shipments, with volumes boosted by significant VLGC activity from the RIPET terminal

Canadian LPG offshore exports (Thousand b/d)



6-Month Ridley Island: ~84.2 Thousand b/d
Average Watson Island: ~16.8 Thousand b/d

Estimated Nameplate Marine Capacity:
~105 Thousand b/d
Two Year Average:
~86.7 Thousand b/d

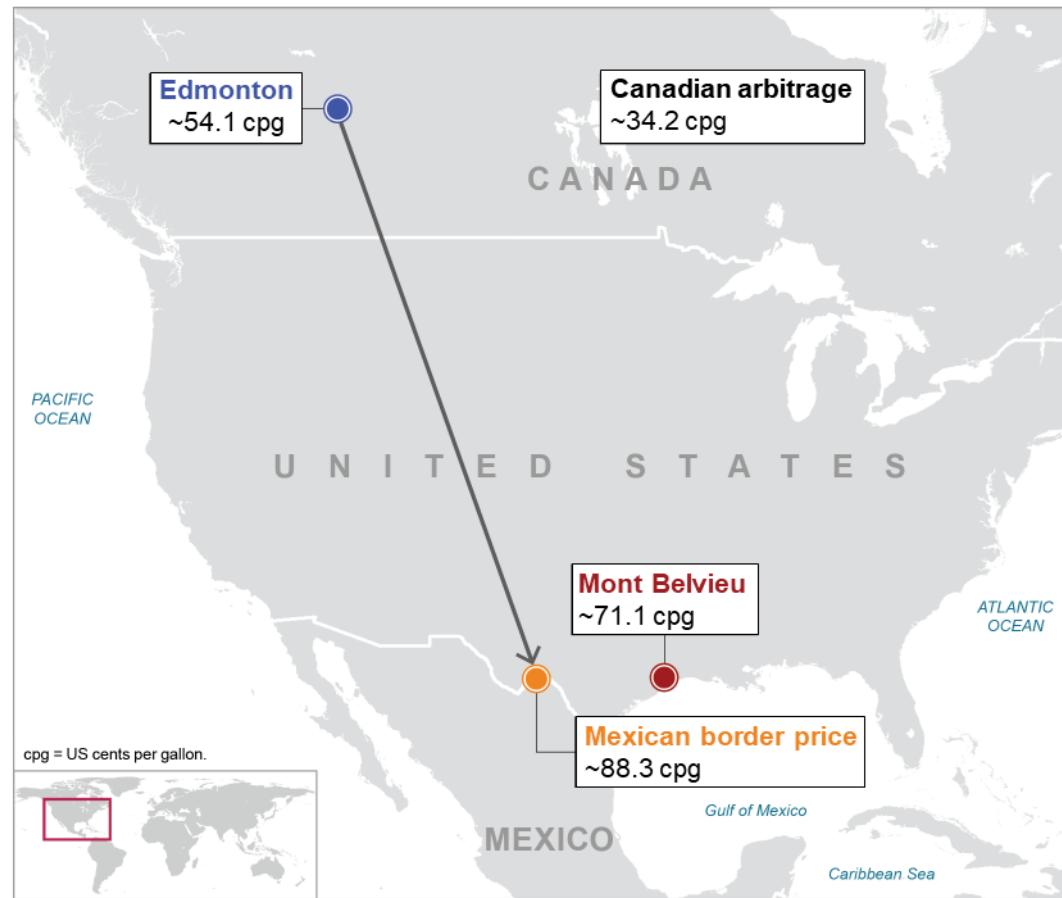
Data compiled October 31, 2025.

Notes: Pembina's Prince Rupert Terminal is located on Watson Island with a capacity of 25,000 b/d. AltaGas' RIPET terminal is located on Ridley Island with a capacity of ~80,000 b/d. Marine exports for the period of 2023 and 2024 have been aligned with the Canada Energy Regulator reported export figures. Marine exports for 2025 are based on estimates provided by S&P Global Commodity Insights Commodities at Sea and are subject to change. Vessel volume allocation based on load port departure date.

Source: S&P Global Commodity Insights, Canada Energy Regulator

After a significant rise in April, Canadian propane rail shipments to Mexico have decreased somewhat but have consistently stayed above 20,000 barrels per day

Mexican border price for propane: July 2025

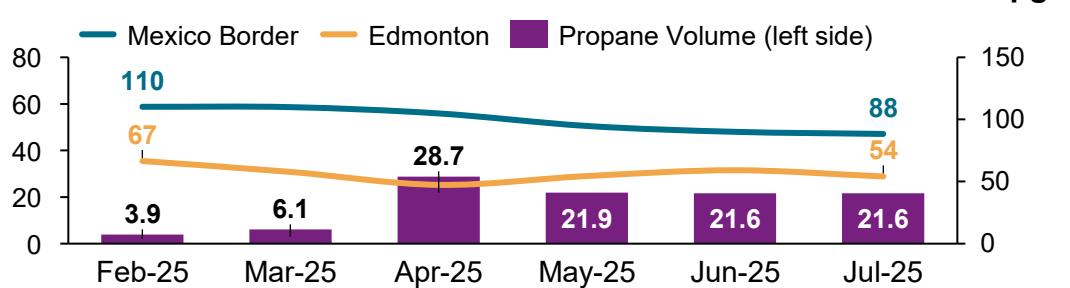


Data compiled October 31, 2025.

Sources: AER; CER; EIA; Government of British Columbia; Government of Saskatchewan; Statistics Canada; S&P Global Commodity Insights: 2012253.

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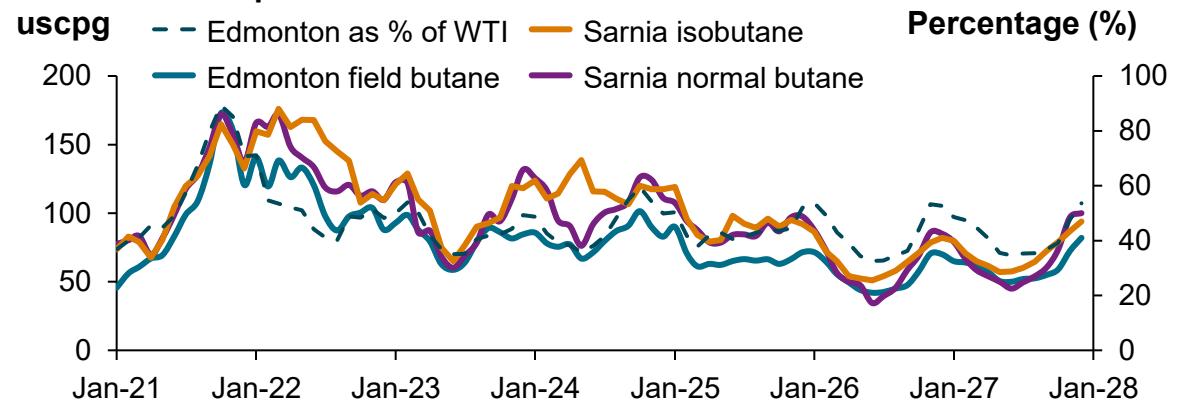
Mexico's imports of Canadian propane
Thousand b/d



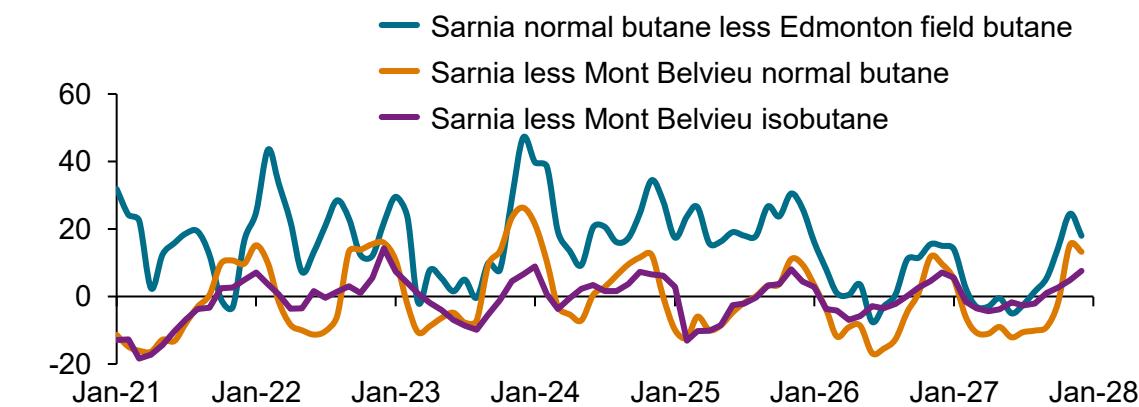
- In July 2025, Canada's propane rail deliveries to Mexico decreased slightly, but stayed relatively similar to the approximately 21,600 b/d exported in the prior month. Following a sharp increase in April, exports to Mexico have remained strong, averaging around 23,500 b/d. In April, propane exports surged from about 6,100 b/d to approximately 28,700 b/d. Prior to this, the last time exports exceeded 20,000 b/d was in June 2021, when they reached 24,600 b/d.
 - Over the past six months, average propane exports from Canada to Mexico have been about 17,300 b/d, primarily driven by robust volumes since April. In contrast, the same period last year saw lower average exports of approximately 11,700 b/d.
- So far in 2025, propane exports to Mexico have averaged around 15,500 b/d, representing 8.0% of total exports. From April to July 2025, rail shipments to Mexico accounted for 12.4% of total Canadian propane exports.
- The price of propane at the Mexican border is influenced by reported import volumes and their corresponding values. In July 2025, the calculated price at the border was approximately 88 uscpg, resulting in a price differential of nearly 34 uscpg compared to prices in Edmonton.

Edmonton butane prices fell in October, along with crude oil prices, as above average inventory levels continue to exert downward price pressure

Canada butane price forecast



Canada and US butane price differentials (uscpg)



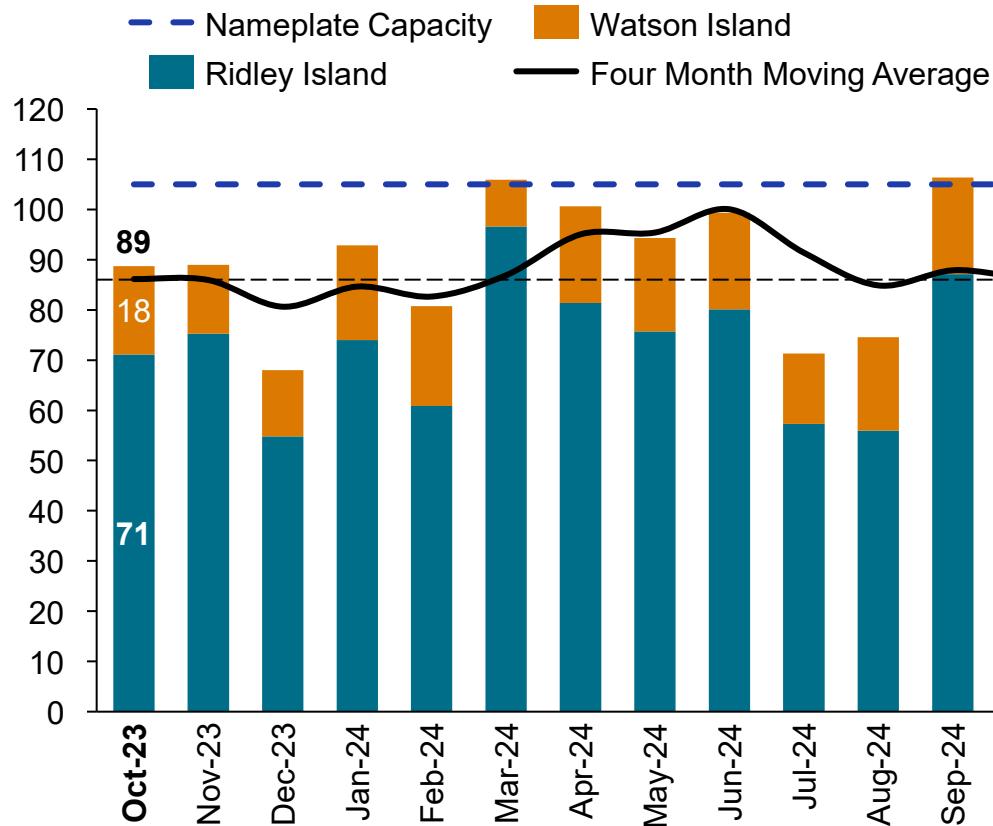
Data compiled October 31, 2025.

Sources: S&P Global Commodity Insights. As of June 2025, the price quotes are from S&P Platts

- In October, field butane prices in Edmonton declined from 66 uscpg to 63 uscpg.
- The ratio compared to WTI crude oil remained essentially unchanged at 43.7%. With forecasts indicating lower crude oil prices throughout 2026, absolute butane prices are expected to decrease.
- Butane inventories in both Canadian regions continue to be above the historical five-year averages. As the blending season progresses, seasonal reductions in stockpiles are anticipated. Prices are projected to peak in January 2026 at 53.7% of the WTI crude oil price.
- Sarnia butane prices saw a significant decrease in October, influenced by lower USGC prices, dropping from 93 uscpg in September to 88 uscpg in October.
- Likewise, Sarnia iso-butane prices declined by six uscpg in October, mirroring the decrease observed in Mont Belvieu prices.

In October, Canadian marine exports increased, totaling seven shipments, with volumes boosted by significant VLGC activity from the RIPET terminal

Canadian LPG offshore exports (Thousand b/d)



6-Month Ridley Island: ~84.2 Thousand b/d
Average Watson Island: ~16.8 Thousand b/d

Estimated Nameplate Marine Capacity: ~105 Thousand b/d
Two Year Average: ~86.7 Thousand b/d

Data compiled October 31, 2025.

Notes: Pembina's Prince Rupert Terminal is located on Watson Island with a capacity of 25,000 b/d. AltaGas' RIPET terminal is located on Ridley Island with a capacity of ~80,000 b/d. Marine exports for the period of 2023 and 2024 have been aligned with the Canada Energy Regulator reported export figures. Marine exports for 2025 are based on estimates provided by S&P Global Commodity Insights Commodities at Sea and are subject to change. Vessel volume allocation based on load port departure date.

Source: S&P Global Commodity Insights, Canada Energy Regulator

Infrastructure

Upcoming Infrastructure Assets – Fractionators

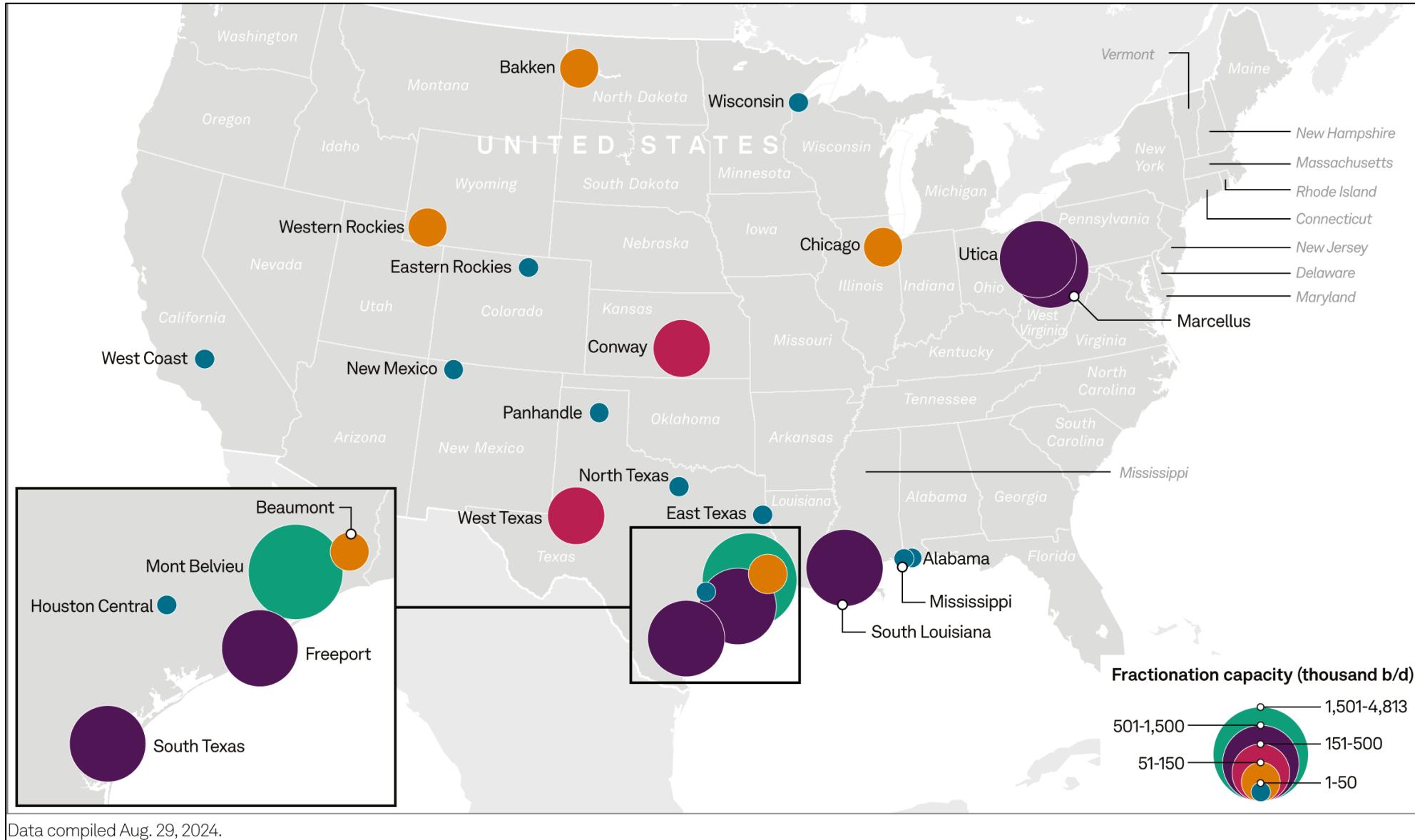
US Fractionators					
Company	Project / Asset	Location	Capacity (Mb/d)	In-service date	Status
Enterprise Products Partners LP	Mont Belvieu (Enterprise) Fractionation 14	Texas	150	11/1/2025	Under Construction
Epic Y-Grade Operations LP [Phillips 66]	BTT EPIC Frac 2	Texas	110	3/1/2026	Planned
Cedar Bayou Fractionators LP	Cedar Bayou Fractionation 11	Texas	150	7/1/2026	Under Construction
MarkWest Liberty Midstream & Resources LLC	Harmon Creek 3 De-ethanization	Pennsylvania	40	7/1/2026	Planned
Lone Star NGL LLC [Energy Transfer LP]	Mont Belvieu (Lone Star) Fractionation IX	Texas	165	11/1/2026	Planned
ONEOK Partners, LP	Medford Frac Rebuild I	Oklahoma	100	11/1/2026	Planned
ONEOK Partners, LP	Medford Frac Rebuild II	Oklahoma	110	3/1/2027	Planned
Cedar Bayou Fractionators LP	Cedar Bayou Fractionation 12	Texas	150	3/1/2027	Under Construction
MPLX LP [Marathon Petroleum Corp]	Gulf Coast Fractionator 1	Texas	150	3/1/2028	Planned
MPLX LP [Marathon Petroleum Corp]	Gulf Coast Fractionator 2	Texas	150	11/1/2029	Planned

Data compiled October 31, 2025.

Note: Permico Midstream Partners proposed fractionation plants are not included.

Source: S&P Global Commodity Insights.

United States – Fractionation Capacity



Canada – Fractionation Capacity

Canada fractionation capacity (thousand b/d)



Data compiled Nov. 25, 2024.

Source: S&P Global Commodity Insights: 240012.

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Upcoming Infrastructure Assets – Pipelines

US NGL pipeline projects						
Company	Project / Asset	Location	Capacity (Mb/d)	Product	In-service date	Status
NuStar	New Burgos	Edinburg, TX	108	LPG	12/1/2022	Proposed
Permico Energia	Simpatico Markham	Corpus Christi, TX	175	E/P Mix	11/1/2024	Proposed
Permico Energia	Simpatico Mont Belvieu	Corpus Christi, TX	250	Ethane	11/1/2024	Proposed
Enterprise Products Partners L.P	Bahia NGL pipeline	Permian	600	Y-Grade	11/1/2025	Under Construction
BANGL, LLC	BANGL Gardendale to Sweeny Extension	Gardendale, TX		Y-Grade	12/1/2025	Under Construction
BANGL, LLC	BANGL Expansion I	Permian	125	Y-Grade	12/1/2025	Under Construction
Energy Transfer	Lone Star Express Expansion II	Permian	90	Y-Grade	1/1/2026	Under Construction
BANGL, LLC	BANGL Expansion II	Permian	50	Y-Grade	1/1/2026	Under Construction
Energy Transfer	Sabina 2 Conversion	Mont Belvieu, TX	45	Natural Gasoline	3/1/2026	Under Construction
Targa	Grand Prix- Delaware Express	Wink, TX		Natural Gas Liquids	6/1/2026	Proposed
Pembina Pipeline	Peace Coupe	Taylor, BC		Natural Gas Liquids/Condensate	6/1/2027	Proposed
Targa	Speedway NGL Pipeline	Permian	500	Natural Gas Liquids	9/1/2027	Proposed
Keyera Energy Ltd.	Key Access Pipeline System (KAPS) - Condensate - Zone 4	Gordondale, AB	350	Condensate	10/1/2027	Proposed

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Upcoming Infrastructure Assets – Pipelines

US NGL pipeline projects						
Company	Project / Asset	Location	Capacity (Mb/d)	Product	In-service date	Status
Keyera Energy Ltd.	Key Access Pipeline System (KAPS) - NGL -Zone 4	Gordondale, AB	350	Natural Gas Liquids	10/1/2027	Proposed
ONEOK Inc. 80% MPLX LP. 20%	MBTC Pipeline	Mt. Belvieu, TX		Y-Grade	1/1/2028	Proposed
BANL, LLC	BANL Texas City Extension	Sweeney, TX		Y-Grade	6/1/2028	Proposed
Marathon Petroleum Company LP and Enterprise Products Partners	Centennial Pipeline Reversal	Bourbon, IL	200	Purity	TBD	Proposed
Pembina Pipeline	Vantage Extension	North Dakota	26	Ethane	TBD	Proposed
Sanchez Production Partners	VelociFrac Ethane	La Salle County, TX		Ethane	TBD	Proposed
Southcross Energy	Woodsboro to Robstown	Woodsboro, TX		Y-Grade	TBD	Proposed
ONEOK Inc.	TXGC Terminal	Mt. Belvieu, TX		Natural Gas Liquids	TBD	Proposed

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

North America – NGL pipelines

NGL pipelines in North America

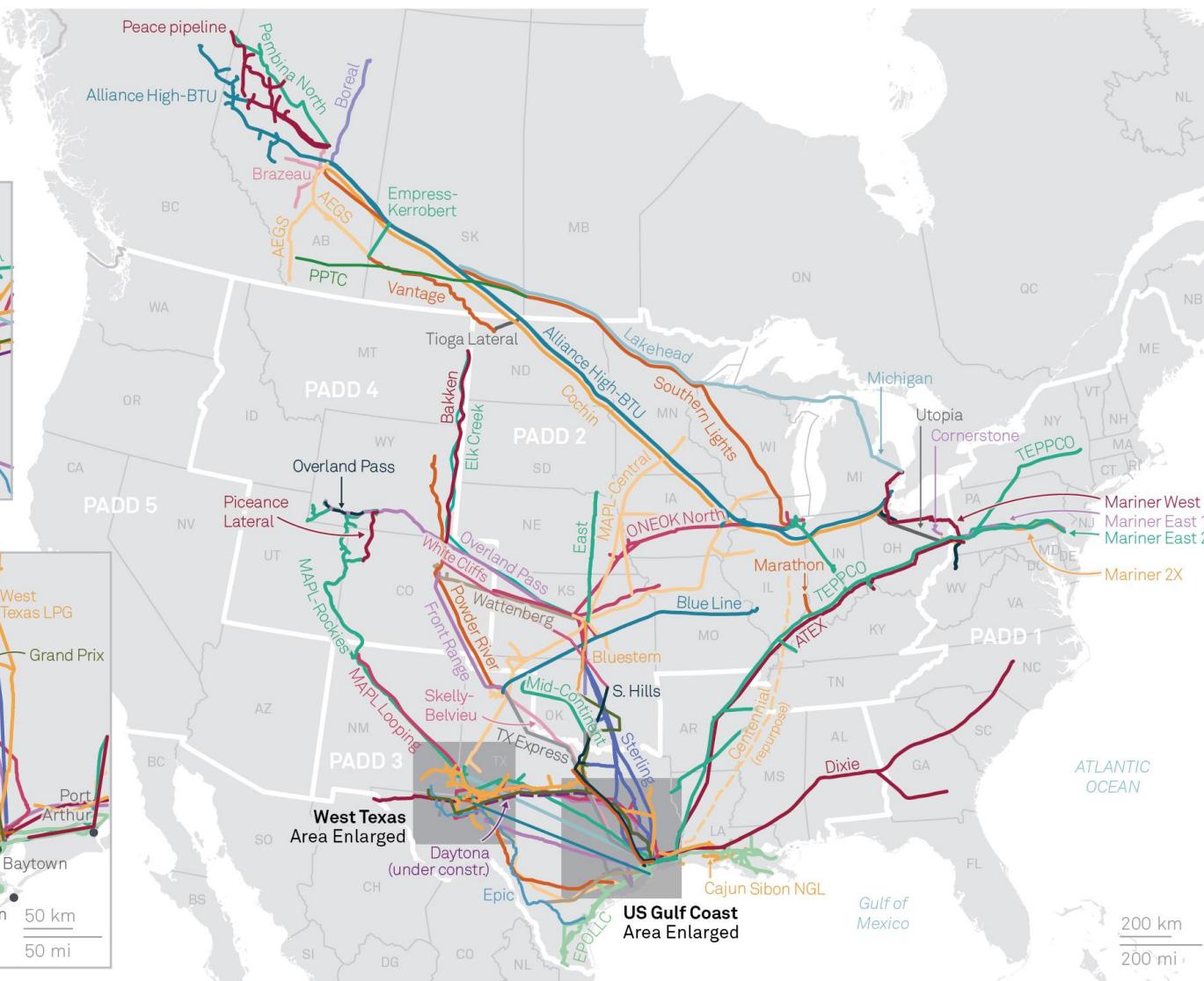
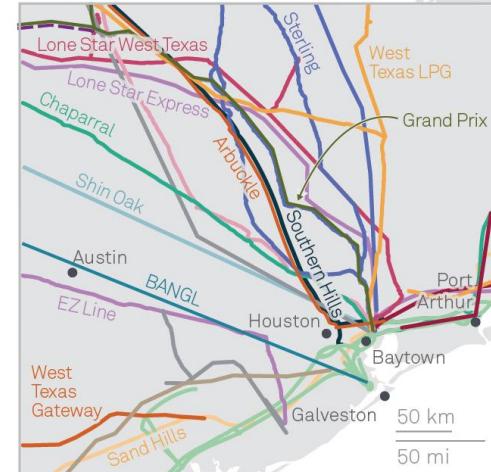
NGL pipelines

- Existing
- Planned, proposed, expansion or under construction

West Texas



US Gulf Coast



Source: S&P Global Commodity Insights, EIA, Plains Midstream, Targa Resources, OneOK

Upcoming Infrastructure Assets – Gas Plants

US gas plant additions						
Company	Plant Name	State	County	Capacity (MMcf/d)	In-service date	Status
Targa Resources Corp	Bull Moose 2	Texas	Winkler	275	11/1/2025	Under Construction
Exxon Mobil Corp	Cowboy CDP (XTO) 2	New Mexico	Eddy	250	11/1/2025	Under Construction
Exxon Mobil Corp	Cowboy CDP (XTO) 3	New Mexico	Eddy	250	11/1/2025	Under Construction
Exxon Mobil Corp	Cowboy CDP (XTO) 4	New Mexico	Eddy	250	11/1/2025	Under Construction
Producers Midstream LP	Lea County 1 Exp.	New Mexico	Lea	30	11/1/2025	Under Construction
New Era Helium Corp	Pecos Slope 1	New Mexico	Chaves	20	11/1/2025	Under Construction
Marathon Petroleum Corp	Secretariat 1	Texas	Culberson	200	11/1/2025	Under Construction
Occidental Petroleum Corp	Seminole RCF A	Texas	Gaines	25	11/1/2025	Under Construction
Occidental Petroleum Corp	Seminole RCF B	Texas	Gaines	25	11/1/2025	Under Construction
Occidental Petroleum Corp	Seminole RCF C	Texas	Gaines	25	11/1/2025	Under Construction
Kinetik Holdings Inc	Kings Landing Phase 1	New Mexico	Eddy	220	11/15/2025	Under Construction
Marathon Petroleum Corp	Titan 3	New Mexico	Lea	50	11/15/2025	Under Construction
Phillips 66, Enbridge Inc	Bighorn 1	Colorado	Weld	365	3/1/2026	Planned
Phillips 66, Enbridge Inc	Bighorn bypass	Colorado	Weld	230	3/1/2026	Planned
Hiland Partners Holdings LLC	Bill Sanderson Exp	North Dakota	Williams	200	3/1/2026	Planned
ONEOK Field Services LLC	Maysville 1 Exp.	Oklahoma	Garvin	62	3/1/2026	Planned
Brazos Midstream Holdings LLC	Sundance 2	Texas	Martin	300	3/1/2026	Planned

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Upcoming Infrastructure Assets – Gas Plants (continued)

US gas plant additions							
Company	Plant Name	State	County	Capacity (MMcf/d)	In-service date	Status	
Vaquero Midstream LLC	Caymus 3	Texas	Pecos	200	3/15/2026	Planned	
Oneok Inc	Cutter 1	Wyoming	Campbell	60	7/1/2026	Planned	
Enterprise Products Partners LP	Dark Horse 4	New Mexico	Lea	220	7/1/2026	Proposed	
Enterprise Products Partners LP	Dark Horse 5	New Mexico	Lea	220	7/1/2026	Proposed	
Enterprise Products Partners LP	Dark Horse 6	New Mexico	Lea	220	7/1/2026	Proposed	
Enterprise Products Partners LP	Dark Horse Cryo 1	New Mexico	Lea	230	7/1/2026	Proposed	
Enterprise Products Partners LP	Dark Horse Cryo 2	New Mexico	Lea	230	7/1/2026	Proposed	
Targa Resources Corp	East Pembroke 1	Texas	Reagan	275	7/1/2026	Under Construction	
Targa Resources Corp	Falcon 2	Texas	Culberson	275	7/1/2026	Under Construction	
MarkWest Liberty Midstream & Resources LLC	Harmon Creek 3	Pennsylvania	Washington	300	7/1/2026	Planned	
Kinetik Holdings Inc	Kings Landing Phase 2	New Mexico	Eddy	220	7/1/2026	Planned	
Enterprise Products Partners LP	Mentone West Plant (EPP) 2	Texas	Loving	300	7/1/2026	Under Construction	
Energy Transfer LP	Mustang Draw 1	Texas	Martin	275	7/1/2026	Under Construction	
OXY USA Inc	North Hobbs Reinjection 1 Exp	New Mexico	Lea	30	7/1/2026	Planned	
Marathon Petroleum Corp	Titan 4	New Mexico	Lea	220	7/1/2026	Proposed	
Enterprise Product Partners LP	Athena 1	Texas	Upton	300	11/1/2026	Planned	

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Upcoming Infrastructure Assets – Gas Plants (continued)

US gas plant additions						
Company	Plant Name	State	County	Capacity (MMcf/d)	In-service date	Status
Targa Resources Corp	East Driver 1	Texas	Glasscock	275	11/1/2026	Under Construction
Phillips 66	Iron Mesa 1	Texas	Ector	300	3/1/2027	Planned
Occidental Petroleum Corp	North Loving Plant 2	Texas	Loving	300	3/1/2027	Planned
Oneok Inc	Bighorn (Oneok) 1	Texas	Reeves	300	7/1/2027	Planned
Targa Resources Corp	Yeti 1	Texas	Winkler	275	7/1/2027	Planned
Exxon Mobil, BP Alaska, ConocoPhillips, Alaska Gasline Development Corp	Alaska LNG 1	Alaska	North Slope	3500	7/1/2028	Planned
Qilak LNG Inc	Qilak Treatment	Alaska	North Slope		7/1/2029	Planned
Tejon Treating & Carbon Solutions LLC	Mongoose 3	Texas	Mitchell			Proposed

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

North America East Coast and Gulf Coast NGL terminals

	Company	Terminal Name	Location	Capacity (Thousand b/d)	Capacity (MMtpa)	Product	Import/Export	Status
Operating Terminals	NGL Energy Partners	Chesapeake	Virginia	15	0.5	LPG	Import/Export	Operating
	Phillips 66	Freeport	Texas	260	7.86	LPG	Export	Operating
	Enterprise Products Partners	Houston	Texas	660	19.84	LPG	Export	Operating
	Enterprise Products Partners	Houston Expansion	Texas	103	3.10	LPG	Export	Operating
	Targa Resources	Galena Park	Texas	230	6.91	LPG	Export	Operating
	Targa Resources	Galena Park expansion 1	Texas	100	3.01	LPG	Export	Operating
	Targa Resources	Galena Park expansion 2	Texas	160	4.81	LPG	Export	Operating
	Targa Resources	Galena Park expansion 3	Texas	33	1	Propane	Export	Operating
	Trafigura	Corpus Christi	Texas	33.3	1.00	LPG	Export	Operating
	Energy Transfer Partners	Nederland	Texas	255	7.66	LPG	Export	Operating
	Energy Transfer Partners	Nederland expansion	Texas	235	7.06	LPG	Export	Operating
	Energy Transfer Partners	Nederland	Texas	30	1.28	Natural Gasoline	Export	Operating
	EnLink	Riverside	Louisiana	16.6	0.5	LPG	Export	Operating
	Blackline	Newington	New Hampshire	5	0.15	Propane	Import	Operating
	Blackline	Providence	Rhode Island	7	0.26	Propane	Import	Operating
	Energy Transfer Partners	Marcus Hook	Pennsylvania	75	1.54	Ethane	Export	Operating
	Enterprise Products Partners	Morgan's Point	Texas	2401	4.94	Ethane	Export	Operating
	Energy Transfer Partners	Nederland (Orbit JV)	Texas	180	3.71	Ethane	Export	Operating
	Energy Transfer Partners	Marcus Hook		280	8.42	LPG	Export	Operating
	Energy Transfer Partners	Marcus Hook expansion	Pennsylvania	50	1.5	LPG	Export	Operating
	Delaware River Partners	Repauno	New Jersey	26	0.86	LPG	Import/Export	Operating
	Energy Transfer Partners	Nederland expansion Flexport	Texas	250 ²	7.5	NGL	Export	Operating
	Enterprise Products Partners	Neches River terminal (Phase 1)	Texas	120 ¹	2.5	Ethane	Export	Operating
Announced Terminals	Company	Terminal Name	Location	Capacity (Thousand b/d)	Capacity (MMtpa)	Product	Import/Export	Status
	Enterprise Products Partners	Houston Ship Channel expansion	Texas	300	9.0	LPG	Export	2H 2026
	Enterprise Products Partners	Neches River terminal (Phase 2)	Texas	180 ethane /360 propane		Ethane/propane	Export	1H 2026
	Energy Transfer Partners	Marcus Hook expansion	Pennsylvania	20	0.41	Ethane	Exports	2H 2025
	Texas City Logistics LLC (50% OneOK, 50% MPLX)	Texas City	Texas	400	12.1	LPG	Export	Planned 2028
	Targa Resources	Galena Park Expansion 4	Texas	132	4	LPG	Export	3Q 2027

Data compiled August 13, 2025.

1) Enterprise's Morgans Point ethane terminal capacity will be modified to 120,000 b/d of ethane and 120,000 b/d of flex between ethane and ethylene. Enterprise's Houston Ship Channel LPG terminals 72 mb/d of LPG and Propylene flex is not included.

2) The project will add up to 250,000 b/d of NGL export capacity at Nederland by late 2025, with full contracts starting in January 2026 and based on our estimate, an even split between ethane/ethylene and propane.

Source: S&P Global Commodity Insights.

S&P Global

Commodity Insights

West Coast LPG Terminals: Operational, Announced and Under Construction

Operational	Company	Project / Asset Name	Location	Total LPG Export Capacity (Mb/d)	Total LPG Export Capacity (MMtpa)	Commercial Operations Date	Status
	AltaGas / Royal Vopak	RIPET	Prince Rupert, BC	80	2.4	2Q2019	Operating
	AltaGas	Ferndale Terminal	Ferndale, WA	75	2.2	1Q2014	Operating
	Pembina Pipeline Corporation	Prince Rupert Terminal	Prince Rupert, BC	25	0.75	2Q2021	Operating
	Total			180	5.35		
Announced and Under Construction	Company	Project / Asset Name	Location	Total LPG Export Capacity (Mb/d)	Total LPG Export Capacity (MMtpa)	Commercial Operations Date	Status
	Royal Vopak / AltaGas	REEF	Prince Rupert, BC	55	1.7	4Q2026	Under Construction
	Royal Vopak / AltaGas	REEF Optimization #1	Prince Rupert, BC	25	0.8	2H2027	Announced
	Trigon Pacific Terminals Ltd.	Trigon Pacific LPG Project	Prince Rupert, BC	84	2.5	2029	Announced
	Royal Vopak / AltaGas	REEF Optimization #2	Prince Rupert, BC	60	1.8	Unknown	Announced
	Total			224	6.8		
Other Announced	Company	Project / Asset Name	Location	Total LPG Export Capacity (Mb/d)	Total LPG Export Capacity (MMtpa)	Commercial Operations Date	Status
	Pembina Pipeline Corporation	Prince Rupert Terminal Expansion	Prince Rupert, BC	15-25 ⁷	0.5-0.8	Unknown	Deferred ⁸
	Pacific Traverse	Kitimat LPG Export Project	Kitimat, BC	42	1.3	N/A	Unlikely to Proceed ⁹
	Total			57-67	1.8-2.1		

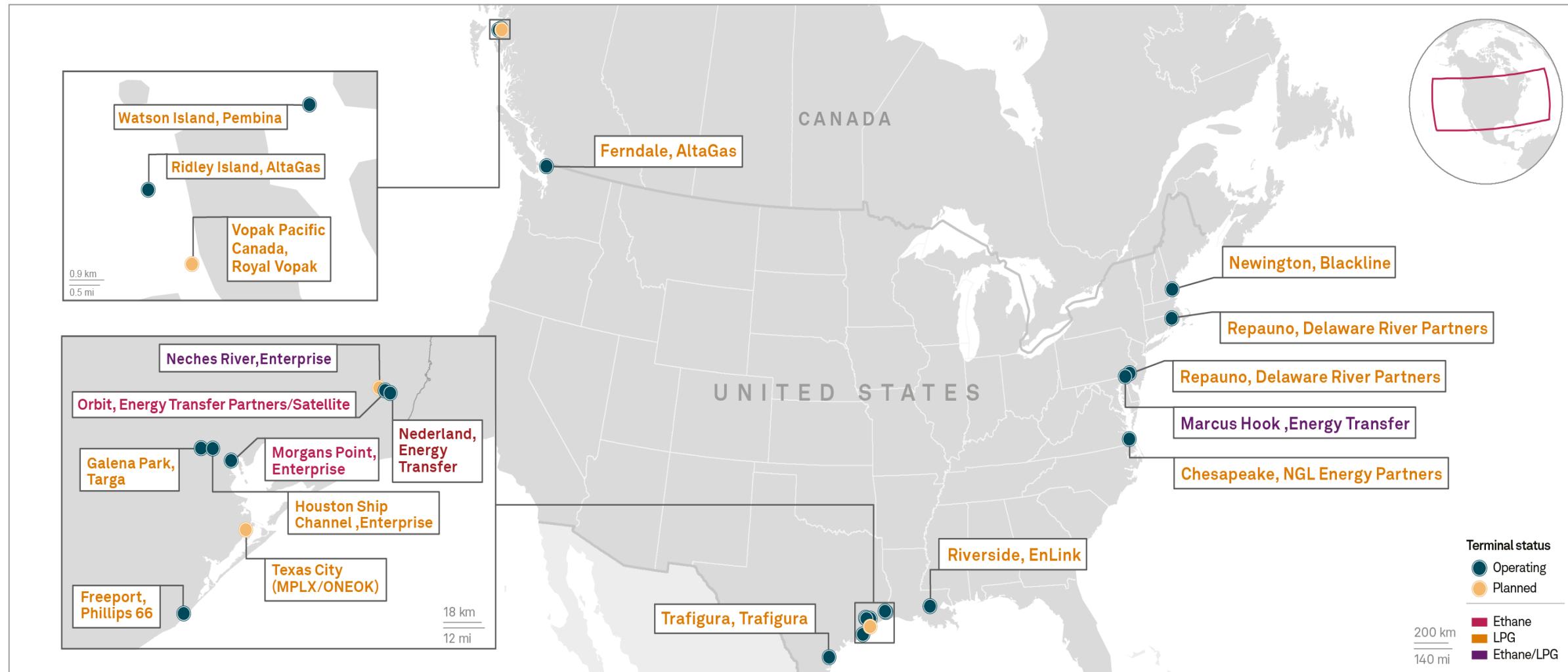
Data compiled October 31, 2025.

Note: The information provided in this table is for information purposes only and is based on S&P Global Commodity Insights assumptions and/or publicly available information.

Source: S&P Global Commodity Insights

North America: NGL Marine Terminals

North American NGL marine terminals



Data compiled May 12, 2025.

Source: S&P Global Commodity Insights: 250907-01.

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North America ethylene plant additions

North America ethylene capacity additions						
Company	Location	Capacity (thousand metric tons)	Feedstock	In-service date	Status	
Shin-Etsu (Shintech)	Plaquemine, LA	500	Ethane	February 2020	Operating	
Dow	Freeport, TX	500	Ethane	May 2020	Operating	
Dow	Orange, TX	90	Ethane	July 2020	Operating	
Dow Inc.	Fort Saskatchewan, Alberta	130	Ethane	1H 2021	Operating	
Gulf Coast Growth Ventures (50:50 JV of ExxonMobil and SABIC)	San Patricio, TX	1,800	Ethane	January 2022	Operating	
Bayport Polymers (Total, Nova Chemicals, Borealis)	Port Arthur, TX	1,000	Ethane	2H 2022	Operating	
Royal Dutch Shell	Monaca, PA	1,500	Ethane	2H 2022	Operating	
Nova Chemical	Sarnia, Ontario	408	Ethane	2023	Completed	
Ineos	Choc. Bayou, TX	340	Ethane	2023	Operating	
Shin-Etsu (Shintech)	Plaquemine, LA	170	Ethane	2025	Planned	
LACC LLC	Lake Charles, LA	400	Ethane	2025	Planned	
Qatar Energy/CP Chem	Orange, Texas	2,080	Ethane	2026	Planned	
Dow	Fort Saskatchewan, Alberta	1,855	Ethane	2027/2029	Planned	

Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

North America on purpose propylene plant (PDH) additions

North America Propylene Value Chain Additions/Reductions						
Company	Location	Process	Supply KMT	Consume KMT	Est. Start-up	Status
Dow	Plaquemine, LA	FCDh	150	Integrated Oxo	2023	Operational
Inter Pipeline	Redwater, Alberta	PDH-PP	520	520	2022	Operational
Enterprise	Mont Belvieu, TX	PDH	750	Merchant	August 2023	Operational

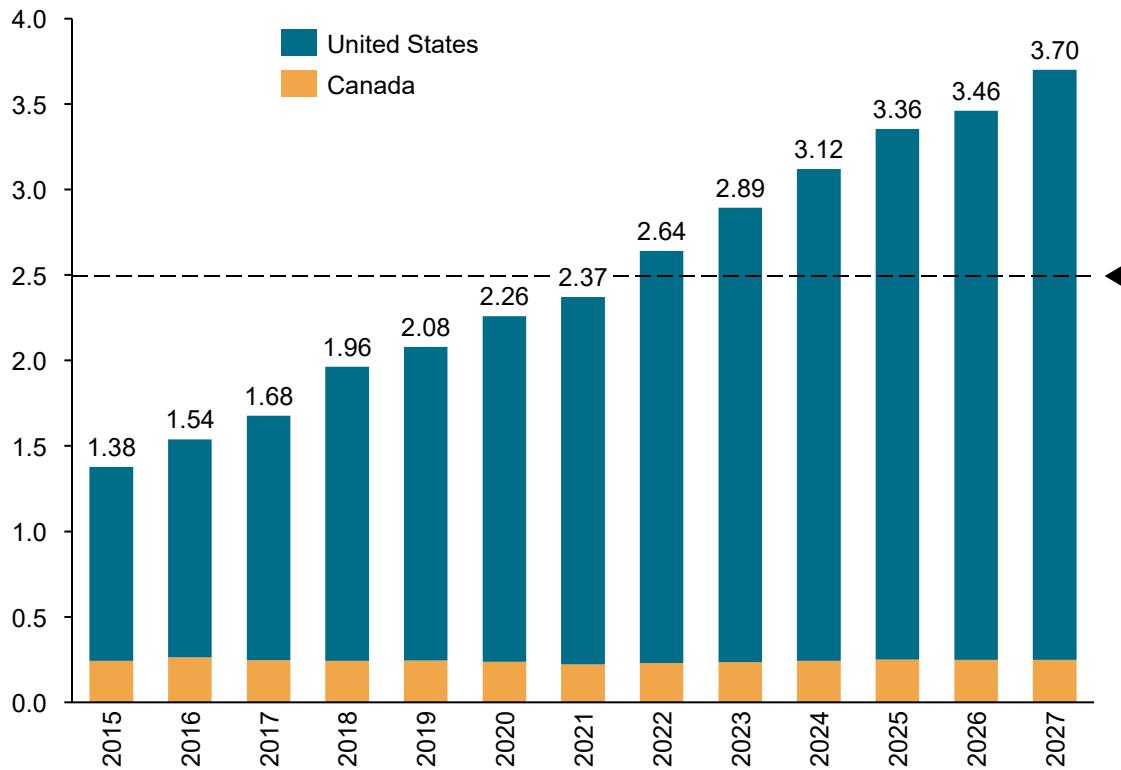
Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

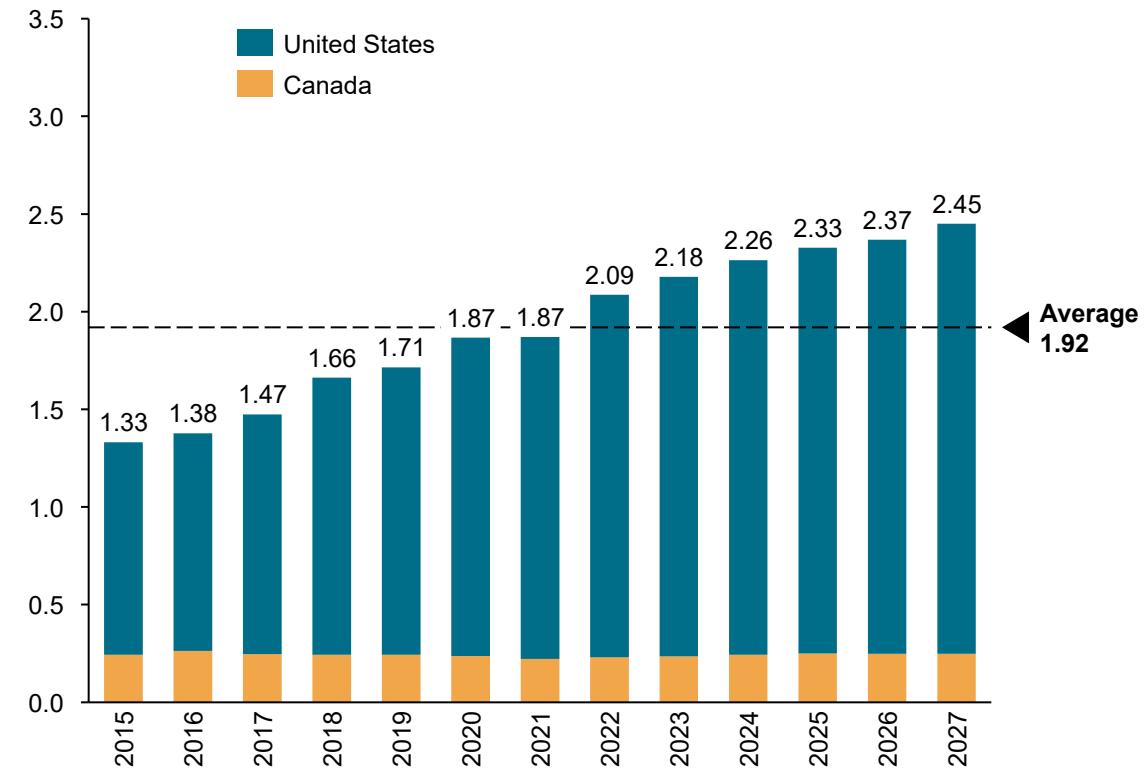
Appendix

Appendix: North America ethane production and demand

North America ethane production (MMb/d)



North America ethane domestic demand (MMb/d)

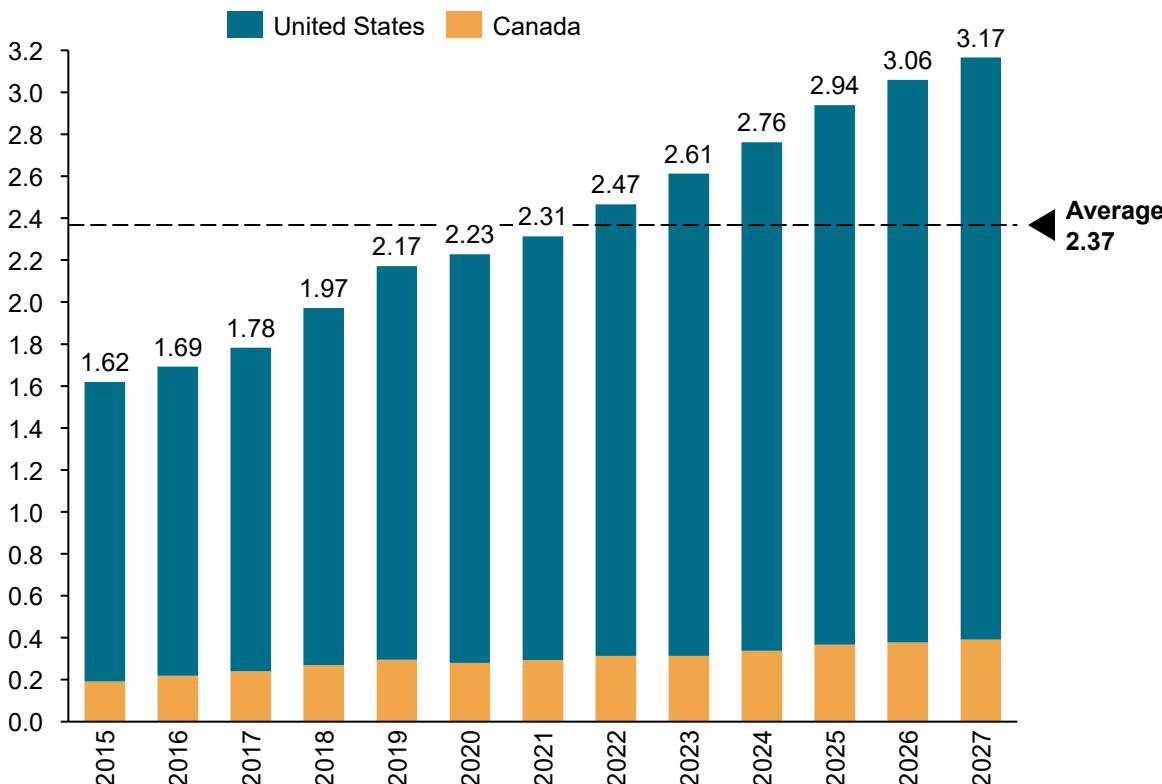


Data compiled October 31, 2025.

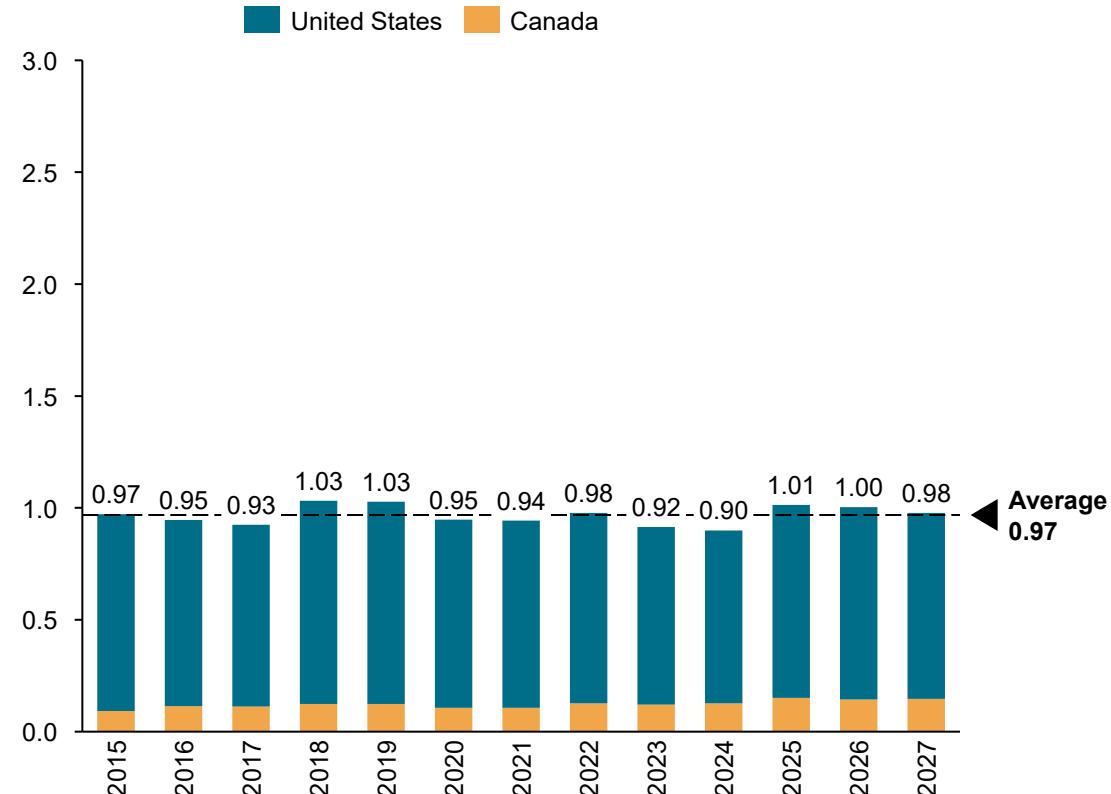
Source: S&P Global Commodity Insights.

Appendix: North America propane production and demand

North America propane production (MMb/d)



North America propane domestic demand (MMb/d)

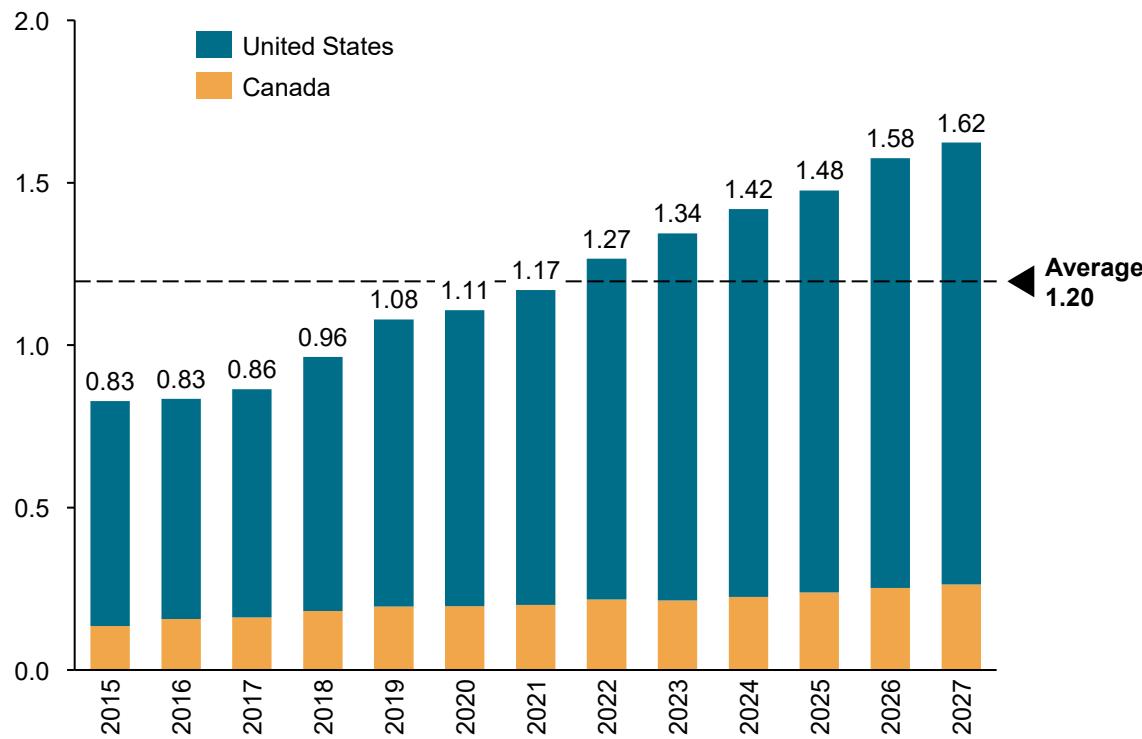


Data compiled October 31, 2025.

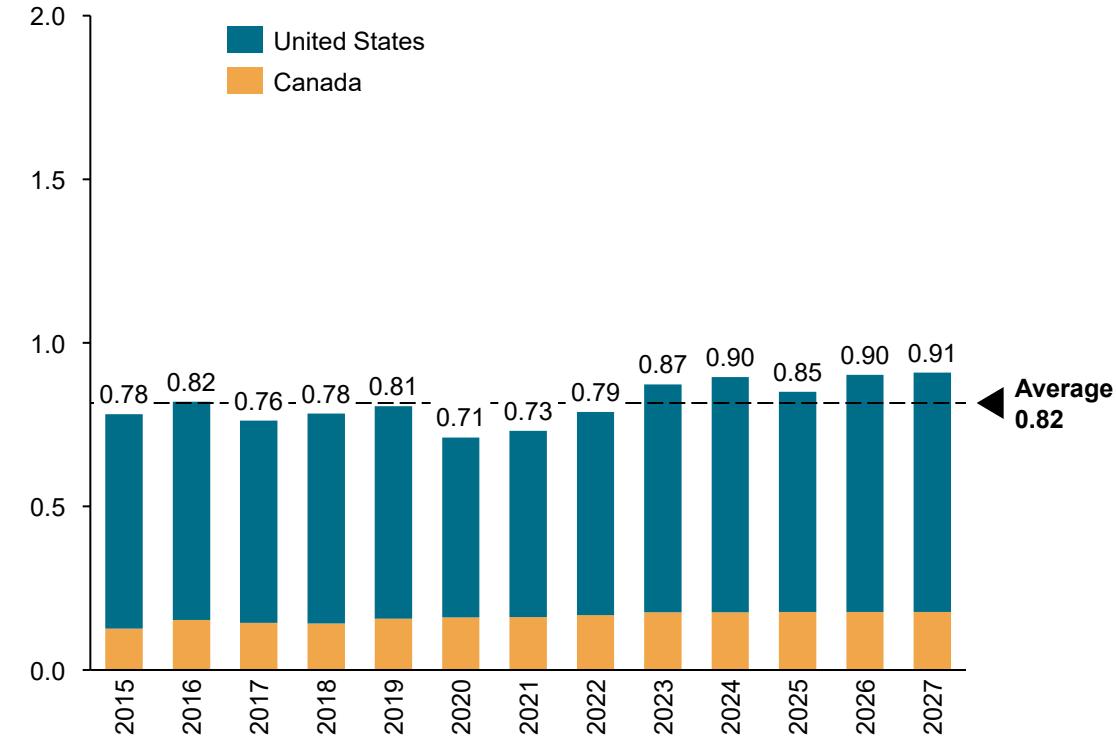
Source: S&P Global Commodity Insights.

Appendix: North America butane production and demand

North America butane production (MMb/d)



North America butane domestic demand (MMb/d)

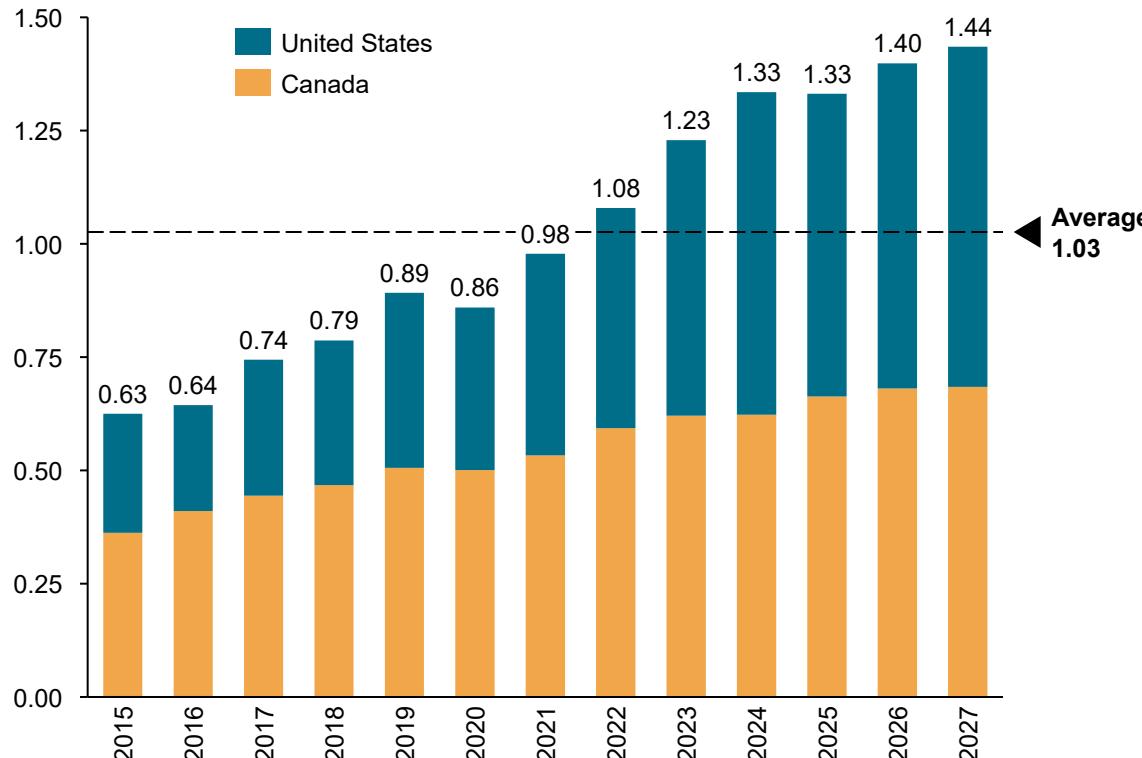


Data compiled October 31, 2025.

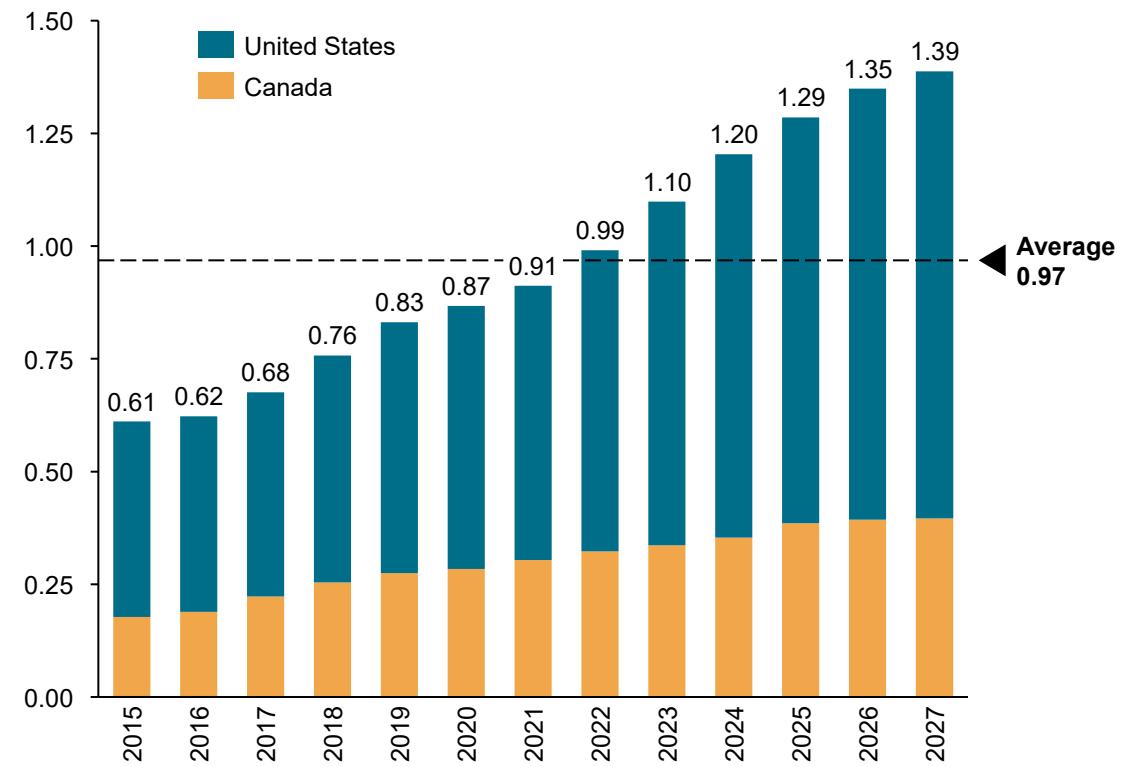
Source: S&P Global Commodity Insights.

Appendix: North America natural gasoline production and demand

North America natural gasoline production (MMb/d)



North America natural gasoline domestic demand (MMb/d)

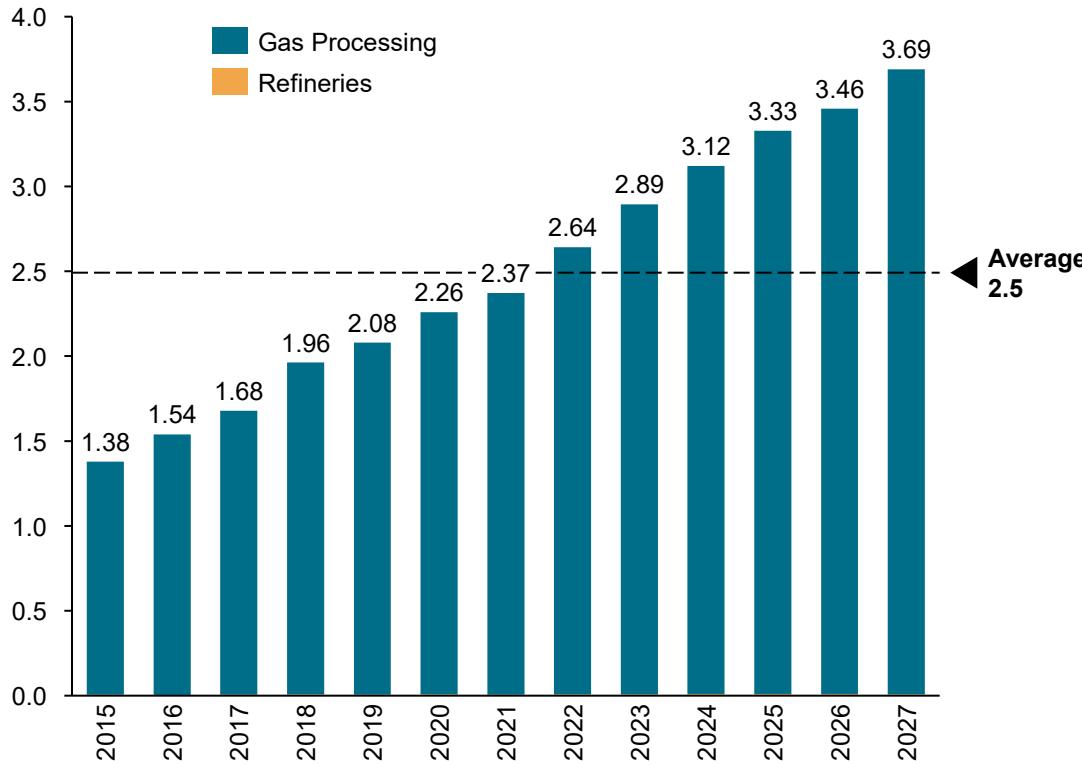


Data compiled October 31, 2025.

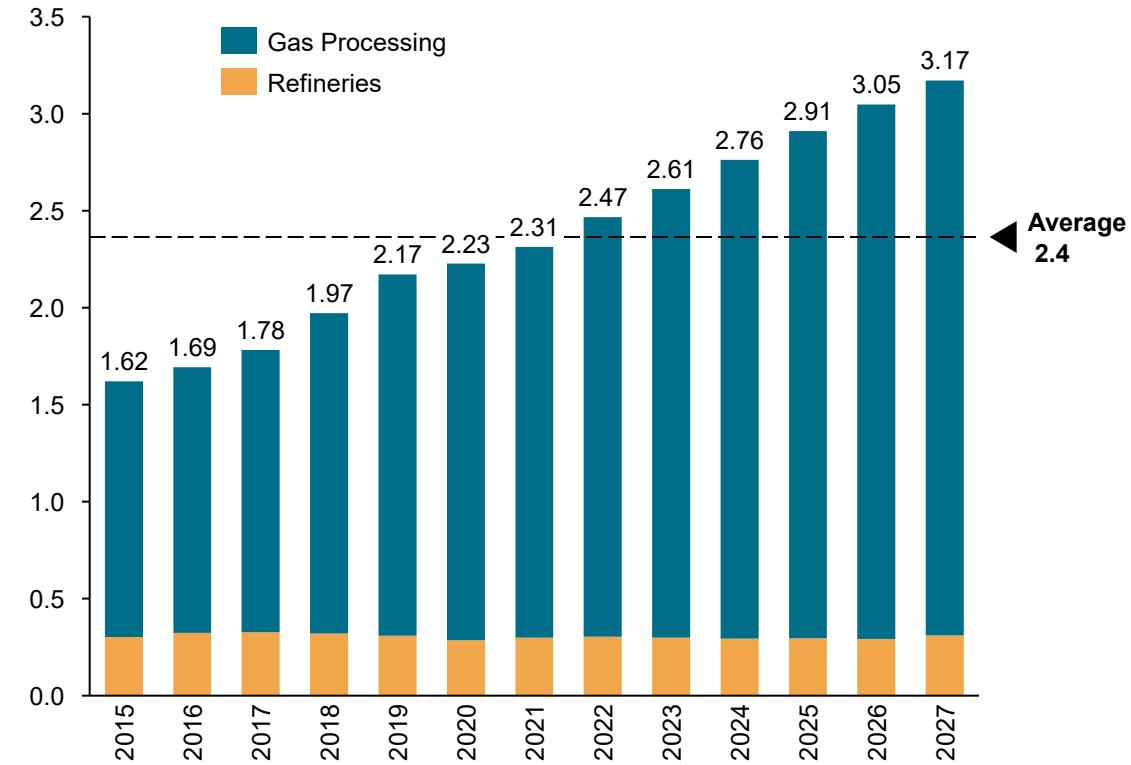
Source: S&P Global Commodity Insights.

Appendix: North America ethane and propane production by source

North America ethane production by source (MMb/d)



North America propane production by source (MMb/d)

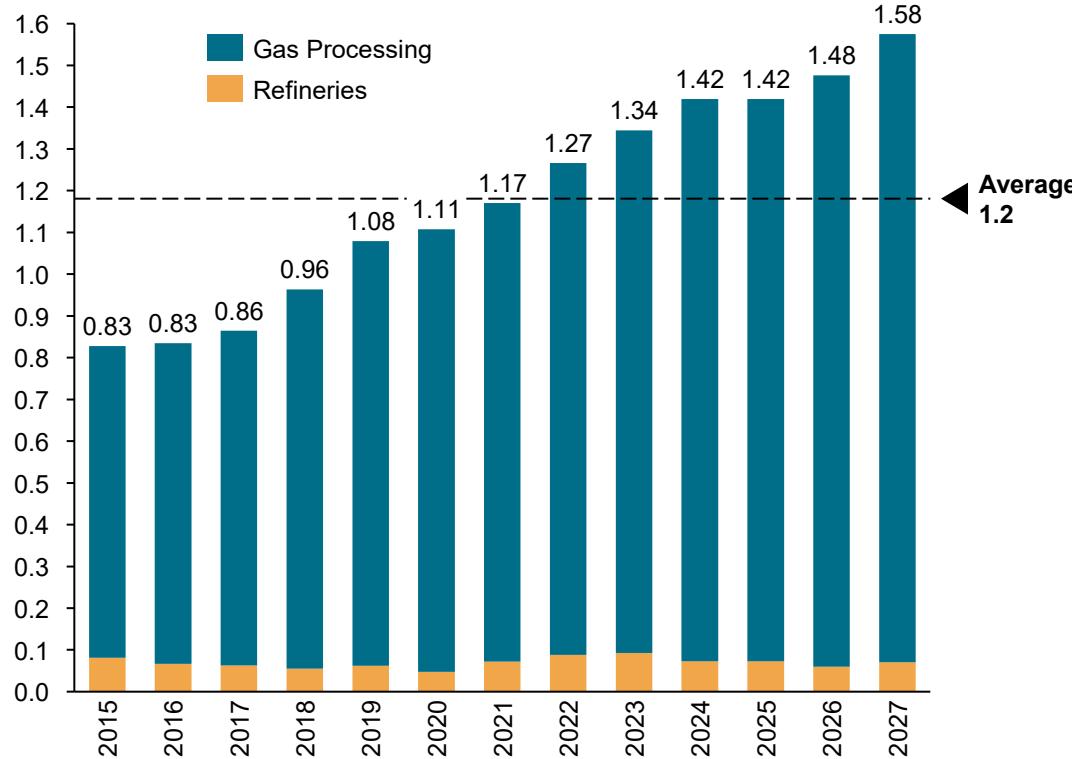


Data compiled October 31, 2025.

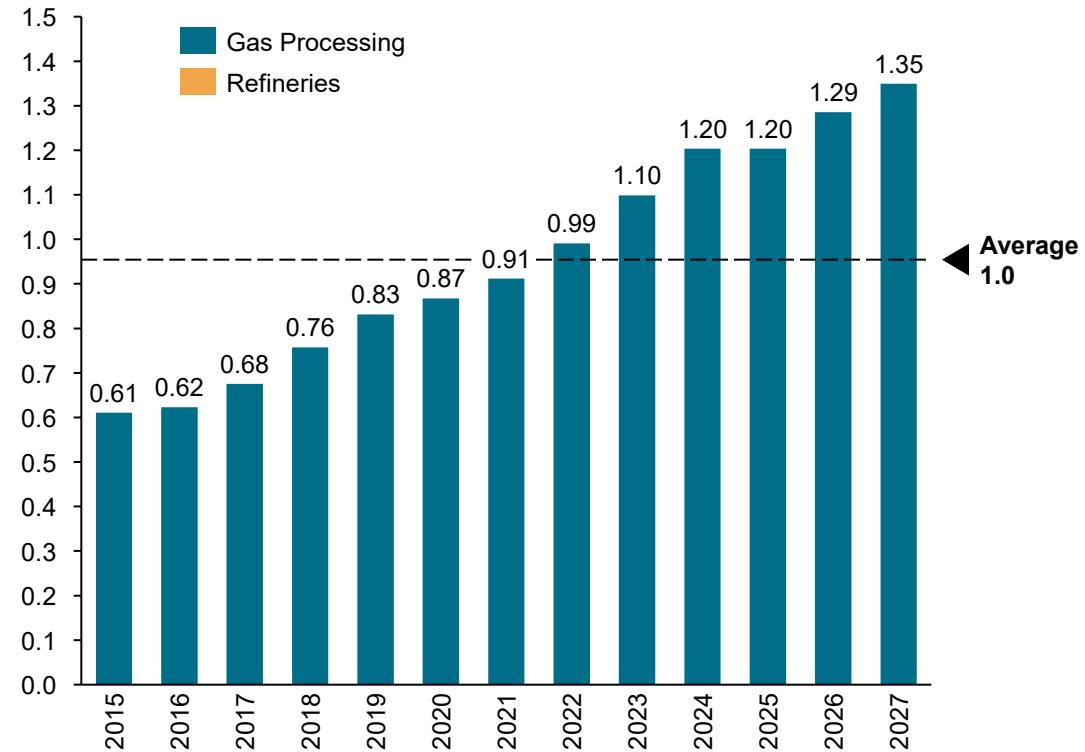
Source: S&P Global Commodity Insights.

Appendix: North America butane and natural gasoline production by source

North America butane production by source (MMb/d)



North America natural gasoline production by source (MMb/d)



Data compiled October 31, 2025.

Source: S&P Global Commodity Insights.

Appendix: Assumptions and forecast risks

Our key assumptions are described below, including possible consequences if markets do not develop as we expect.

- Absolute NGL prices strongly correlate with crude oil and refined product prices. Therefore, we utilize the S&P Global Commodity Insights crude oil and refined products price forecasts as the foundation for our NGL forecasts. Fluctuations in crude prices can alter market dynamics that affect NGL prices.
- Natural gas prices have an influence on ethane prices, and changes in gas markets may impact ethane prices. NGL supply is a byproduct of upstream crude and gas production. Production cuts in the upstream sector and disruptions within the midstream supply chain that deliver NGL products to the market can lead to near-term price volatility.
- NGL demand, trade, and prices are highly seasonal. We generally assume typical historical seasonality, with any exceptions noted in the text. Monthly NGL prices, supply/demand, and trade are all influenced by seasonality, and we maintain this assumption with exceptions specified in the text.
- S&P Global Commodity Insights typically does not forecast the occurrence or timing of unannounced or unusual events that could impact NGL pricing, supply/demand, or trade. However, S&P Global Commodity Insights does make independent assumptions regarding announced events, such as the startup dates of infrastructure projects.
- S&P Global Commodity Insights relies on third-party price discovery companies for historical NGL prices, while price forecasts are developed internally by S&P Global Commodity Insights. The organization utilizes S&P Global Commodity Insights Waterborne LPG, the S&P Global Commodity Insights Global Trade Atlas, customs data, and news reports for trade information. NGL trade outlooks are formulated by S&P Global Commodity Insights based on these sources and our projections for global supply and demand.
- S&P Global Commodity Insights strives for consistency with other forecasts from the organization regarding the economy, petrochemicals, and other factors influencing the NGL forecast. Some differences may occur, primarily related to variations in timing or granularity of forecasts.

Our price forecasts are based on careful evaluations of possible changes in market conditions. Our pricing methodology document can be found here: [NGL — Connecting energy and chemicals: How S&P Global Commodity Insights analyzes and forecasts NGL prices](#)

Source: S&P Global Commodity Insights.

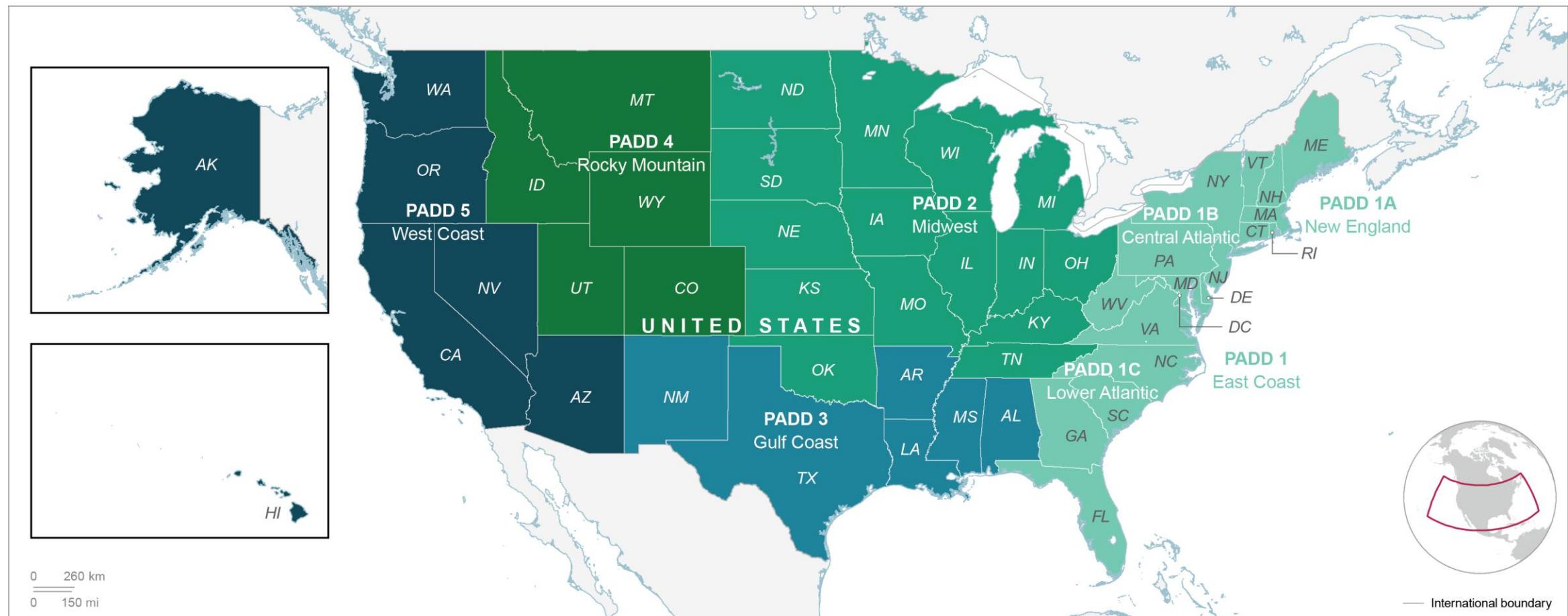
Appendix: Glossary

Abbreviations and Acronyms			
E-P	Ethane-Propane Mix	USGC	US Gulf Coast
Gal	US gallon	LA	Los Angeles
\$	US dollars	IEA	International Energy Agency
bbl	Barrels	DOE	Department of Energy
b/d	Barrels per day	NGL	Natural Gas Liquids
Mb/d	Thousand barrels per day	OPIS	Oil Price Information Service
MMb/d	Million barrels per day	US	United States
cpg	US cents per gallon	iC4	Isobutane
\$/bbl	US dollars per barrel	nC4	Normal Butane
\$/MMBtu	US dollars per million British thermal units	DOE	US Department of Energy
LSB	Light sweet crude blend (Canadian)		
PADD	US Petroleum Administration for Defense District		
MMcf/d	Million cubic feet per day		
WTI	West Texas Intermediate crude oil		

Source: S&P Global Commodity Insights.

Appendix: Petroleum administration for defense districts (PADD)

Petroleum Administration for Defense Districts



Data compiled Jan. 20, 2023.
Source: S&P Global: 2008417.

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Appendix: Demand definitions

Residential	Commercial	Industrial	Engine Fuel
Refers to the consumption of NGLs by households for cooking, heating, and water heating. Other uses may include clothes drying, air conditioning, lighting, and more.	Is similar to residential demand, but it pertains to the use of NGLs by businesses for purposes such as cooking, heating, and powering equipment.	Refers to the consumption of NGLs by various industries for a range of applications, including heating, processing, and water heating. Other applications may include furnaces, kilns, ovens, and dryers.	Refers to the consumption of NGLs as a fuel for internal combustion engines, primarily in vehicles and equipment. This type of demand is driven by the use of NGLs in transportation, particularly in fleet vehicles, taxis, and buses, as well as in industrial applications such as forklifts.
Agricultural	Manufactured Gas	Refining	Chemical
Refers to the consumption of NGLs in the agricultural sector for various applications, including crop drying, heating, and powering equipment. Farmers utilize NGLs for tasks such as drying grains, heating greenhouses, and fueling machinery like tractors and irrigation systems.	Refers to the consumption of NGLs produced through the process of gasification. This type of NGLs is often used as a substitute for traditional natural gas in various applications, including heating, cooking, and industrial processes.	Refers to the consumption of NGLs produced as a byproduct during the crude oil refining process. Additionally, during the refining process, NGLs may be blended with other hydrocarbons or additives to meet specific quality standards or enhance its properties for various applications.	Refers to the consumption of NLGs as a feedstock in the chemical industry for producing various chemicals and materials. NGLs are utilized in processes as a feedstock to produce products like ethylene, propylene, and butylene, which are essential for plastics, synthetic fibers, and other chemical products.

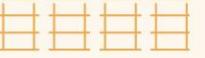
Data compiled September 2024.

Note: Manufactured Gas also known as Town Gas.

Source: S&P Global Commodity Insights

Appendix: NGL unit conversion factors and properties

NGL unit conversion factors and properties

Per metric ton				Gross heating value			
Ethane		Mixed butanes		Ethane		Mixed butanes	
Barrels	Gallons	Barrels	Gallons	Btu per gallon		Btu per gallon	
17.7	742	11.0	461	66,340	101,685		
							
Propane		Normal butane		Propane		Normal butane	
Barrels	Gallons	Barrels	Gallons	Btu per gallon		Btu per gallon	
12.4	521	10.8	453	91,563	103,740		
							
Natural gasoline		Isobutane		Natural gasoline		Isobutane	
Barrels	Gallons	Barrels	Gallons	Btu per gallon		Btu per gallon	
9.5	397	11.2	469	115,540	99,630		
							

As of April 26, 2024.

Btu = British thermal unit.

Mixed butanes are a blend of normal butane and isobutane in a 1:1 ratio. The gross heating value assumes the fuel to behave as an ideal gas at 60 degrees F.

Source: S&P Global Commodity Insights.

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Appendix: S&P Global Commodity Insights Midstream NGL Insights

Select recent reports relating to the North American NGL market:

- S&P Global Commodity Insights Midstream NGL Insight: [Propane 2025–26 winter outlook](#) (October 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [How will the slowdown in crude production affect the growth of NGLs...](#) (October 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Targa expands NGL infrastructure: A response to increasing NGL supply...](#) (October 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Supply-led, demand-resilient: The paradox of NGL markets](#) (August 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Webinar Series: Client Briefing – Tariffs Upend Markets \(April 17\)](#) (April 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Potential tariffs and diluent demand: Examining the potential impact of tariffs...](#) (February 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Tariff threats and LPG storage: Examining the state of LPG inventories across Canada](#) (February 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Top 10 themes facing the NGL markets in 2025](#) (January 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Phillips 66's announced Epic NGL acquisition](#) (January 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Navigating the future: US-China ethane trade, tariff implications and strategic expansion](#) (January 2025)
- S&P Global Commodity Insights Midstream NGL Insight: [Meeting the need: Expanding fractionation capacity in Western Canada](#) (December 2024)
- S&P Global Commodity Insights Midstream NGL Insight: [Canada to introduce new cap-and-trade system to reduce emissions...](#) (December 2024)
- S&P Global Commodity Insights Midstream NGL Insight: [Canada's LPG exposure to potential Trump-imposed US tariffs](#) (December 2024)
- S&P Global Commodity Insights Midstream NGL Insight: [Canadian NGLs growth: Will fractionation keep up?](#) (November 2024)

Please note: Access to individual reports depends on client subscriptions.

Contact us

PRIMARY CONTACT(S)

Veeral Mehta

veeral.mehta@spglobal.com

Bill Rawlusyk

bill.rawlusyk@spglobal.com

CONTACT US

Americas

+1 800 597 1344

Asia Pacific

+60 4 296 1125

Europe, Middle East, Africa

+44 (0) 203 367 0681

www.spglobal.com/en/enterprise/about/contact-us.html

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