S&P Global

Commodity Insights

Canadian Feedstock Outlook and Trends

Prepared for:



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June 2025

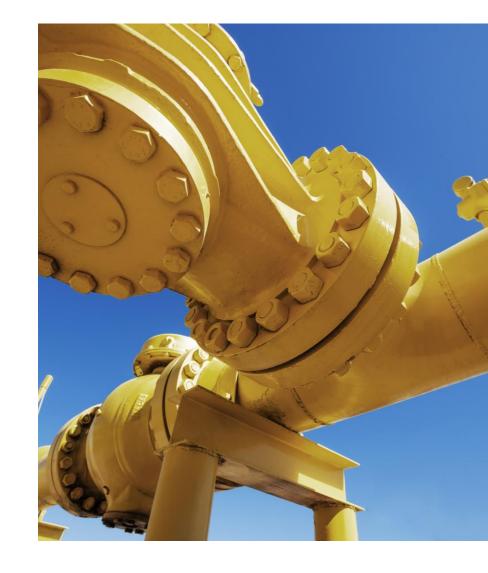


Agenda

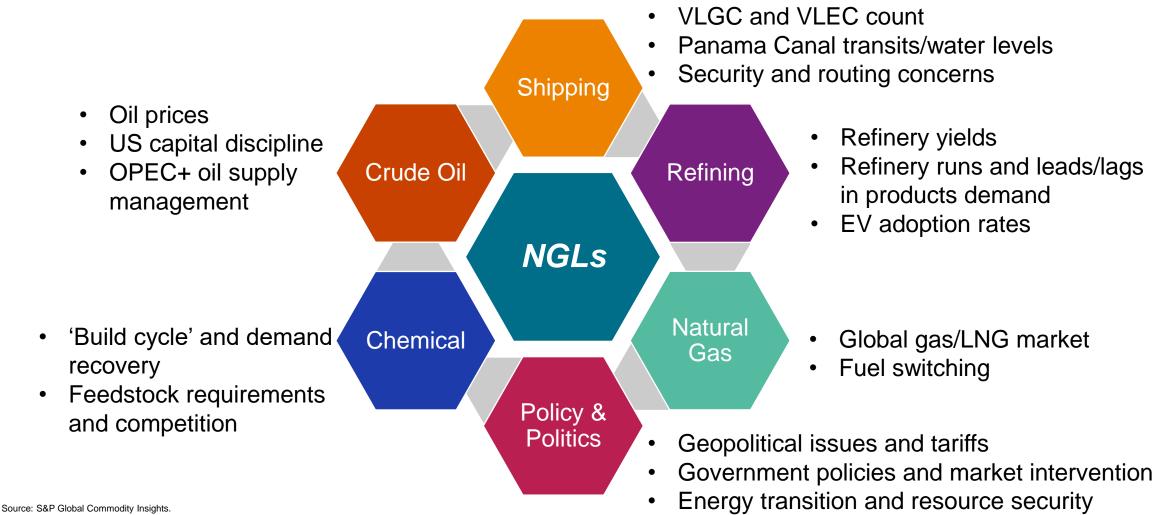
- Canadian Feedstock Outlook and Trends
 - -Global NGL Market Update
 - -Canada NGL Market Update
 - Ethane
 - Propane



Global NGL Market Update



NGL markets are influenced by and continually respond to fluctuations in related markets and wider global trends



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Big picture: Economic outlook and key risks

The outlook for Canada has been downgraded due to industrial weakness from significant trade uncertainty







Base case

- Global expansion is subdued due to various structural headwinds.
- Inflation prospects remain uncertain with limited monetary and fiscal stimulus options.
- No recessions are forecasted, but slowdowns are expected in the US and mainland China, along with ongoing weakness in the EU.
 - Canada's Real GDP growth forecasted to be between 0.7-0.8% for 2025-2026

Downside

- Rise of protectionism impacts trade and market confidence.
- Persistent fiscal tightness due to ongoing inflation and heightened risk aversion.
- Concerns over debt sustainability leads to higher yields and further fiscal tightening.

Upside

- Proposed US tariff increases result in concessions; policy uncertainty decreases.
- Household and corporate tax cuts boost US growth, positively impacting trade and market confidence.
- Downward inflation surprises prompt quicker, more substantial interest rate cuts, alleviating fiscal concerns.

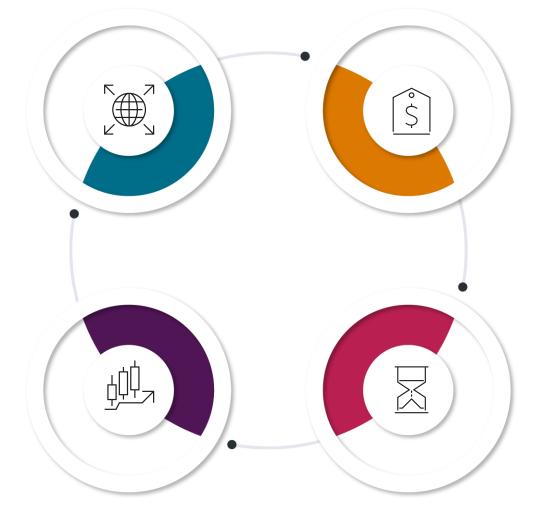
Source: S&P Global Market Intelligence.

Uncertainty is centered on, but not confined to, trade and tariffs

Many "anchors" of the pre-pandemic period have become more uncertain

US policy shifts

- Protectionism
- Geopolitical frictions
- Role of the US dollar



Return of inflation

- Supply disruptions
- Tariffs
- Sticky service prices

Higher interest rates

- Countering inflation
- End of ultra-low policy rates
- Rise in term premium

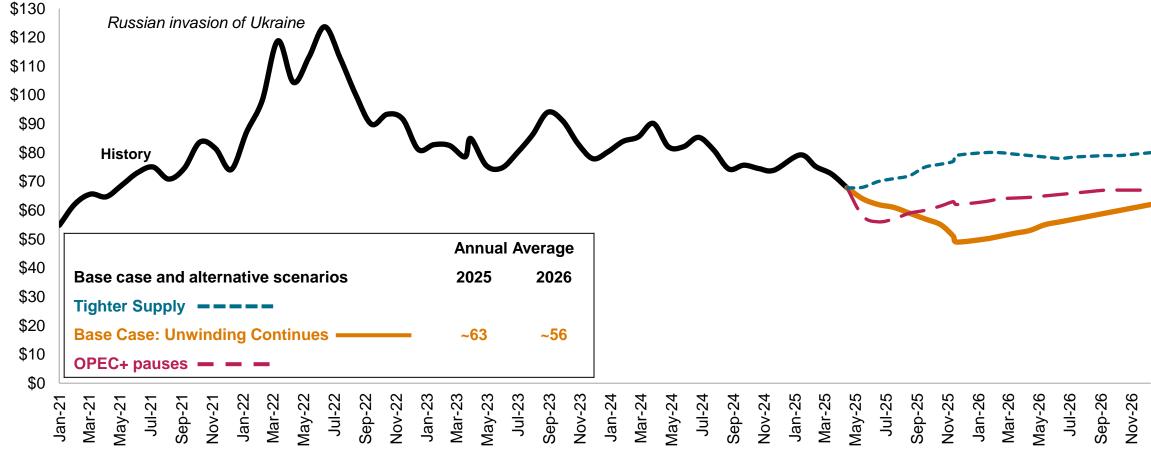
Fiscal instabilities

- High debt and deficits
- Political instability
- Unwinding of quantitative easing

Source: S&P Global Market Intelligence.

Our base case assumes a full unwinding of the 2.2 million b/d OPEC+ cuts made in 2023; prices dip into the low \$50s and high \$40s





Data compiled May 28, 2025.

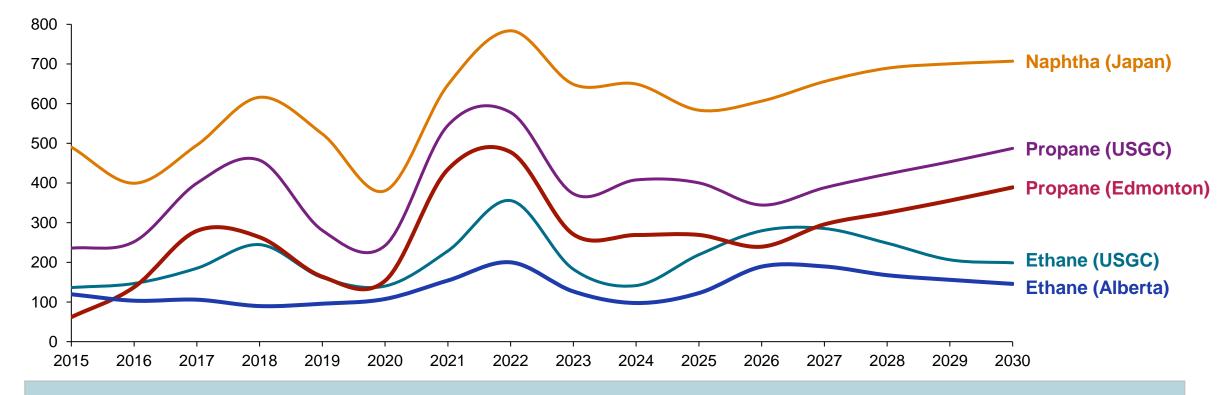
Historical Dated Brent prices from Platts

Source: S&P Global Commodity Insights.



The relationship between ethane and competing feedstocks will change over the long-term due to declining oil demand; ethane still expected to remain competitive

Feedstock price comparison (\$/metric tons - Constant 2024 \$US)



A strong price advantage exists for Canadian feedstocks compared to other petrochemical feedstock sources.

Data compiled May 2025

Notes: USGC = US Gulf Coast. The estimated Edmonton ethane price is calculated based on the AECO natural gas price and an assumed extraction premium. This estimated price does not include an additional transportation fee. Source: S&P Global Commodity Insights

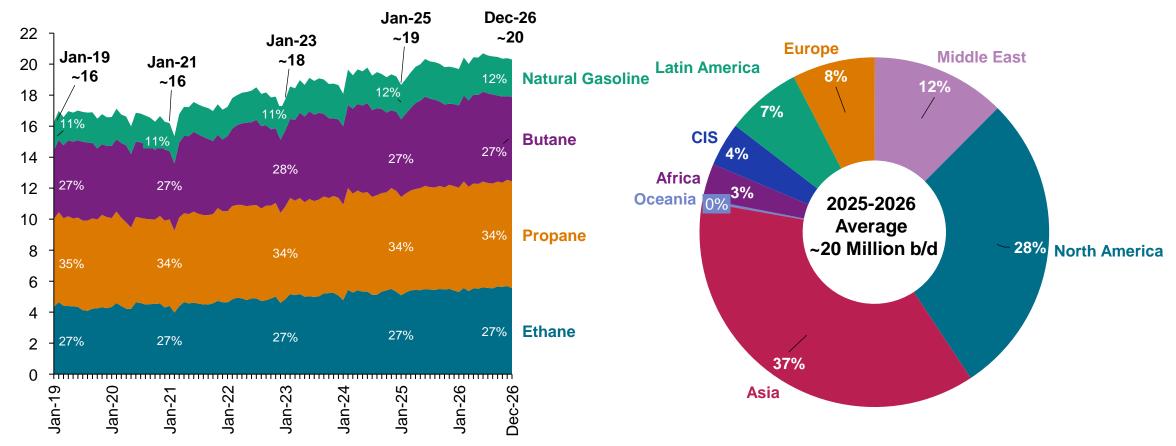




Global NGL production will steadily increase over the short-term; while North America and Asia will account for over half of total demand

Global NGL production by product (Million b/d)

Global NGL demand by region



Data compiled May 2025

Notes: Global demand/supply estimates based on monthly STO and ASW reports (July 2024). Global demand/supply balance is based on the latest monthly regional outlooks. Monthly data is only available for select countries. For all other regions, a monthly average has been assumed based on the annual figure. Includes demand for C2, C3, C4, and C5+. NGL production from both gas processing/fractionation facilities and refineries. Does not include other production or net storage withdrawals.

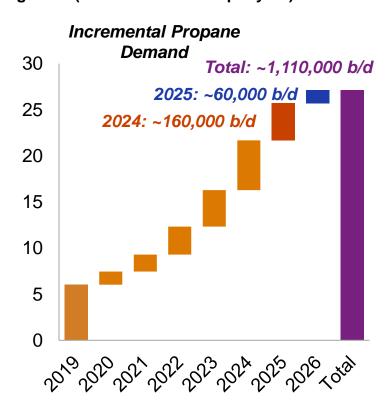
Source: S&P Global Commodity Insights

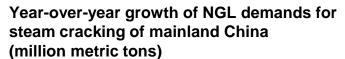


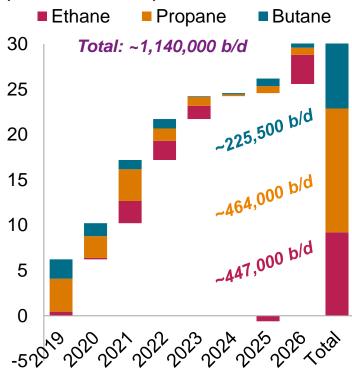
Asia will continue to drive the growth of LPG demand for olefins in the world, in part due to additional new PDH units coming online

Outlook is lower amid the US-China tariff situation, which may delay new startups and/or reduce run rates

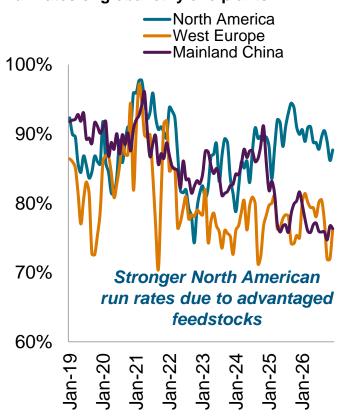
PDH capacity of mainland China: year-over-year growth (million metric tons per year)







Run rates of global ethylene plants



Data compiled May 2025

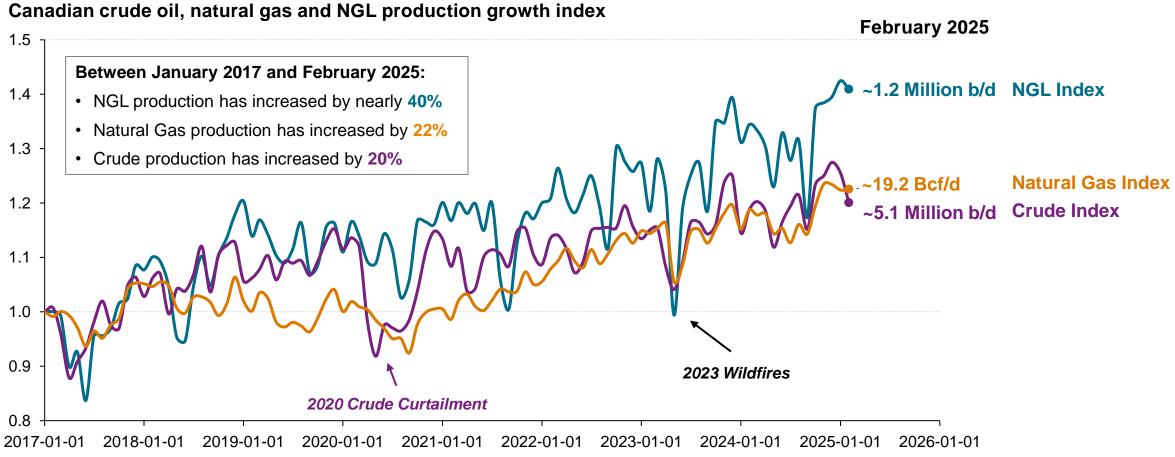
Source: S&P Global Commodity Insights



Canada NGL Market Update



The growth rates of Canadian NGLs, crude oil, and natural gas began to diverge around 2018; since then, NGLs have shown a higher average growth rate



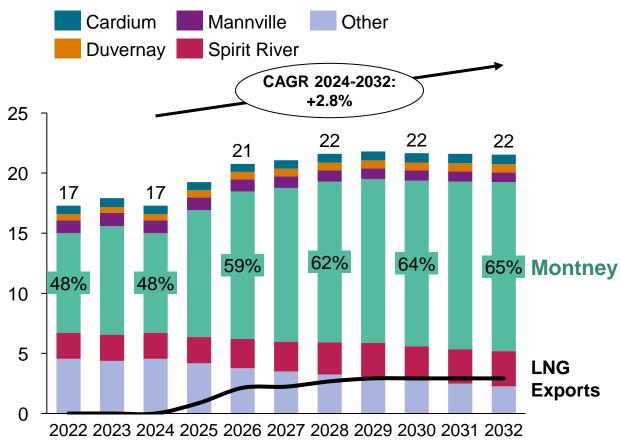
Data compiled May 2025

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

LNG exports remain the main driver of Western Canadian demand growth; nearly all Canadian production growth is expected to come from the Montney formation

Western Canada natural gas production and LNG exports (Bcf/d)



Western Canada LNG Projects



LNG Canada Phase 1

Commercial Start: Summer/Fall 2025

Capacity: ~1.8 Bcf/d



Woodfibre LNG

Commercial Start: Fall 2027

Capacity: ~0.3 Bcf/d



Cedar FLNG

Commercial Start: Winter 2029

Capacity: ~0.4 Bcf/d

Total LNG Export Capacity: ~2.5 Bcf/d

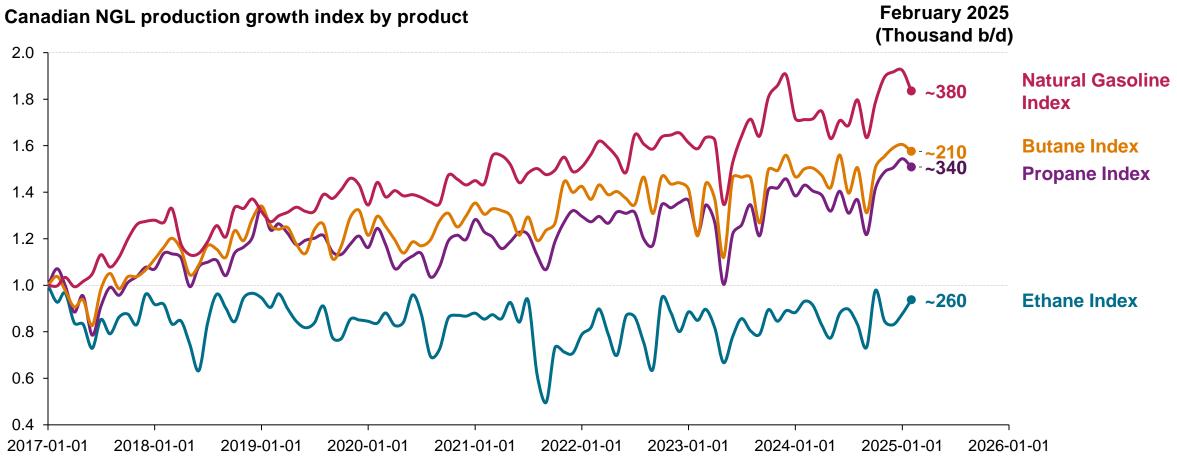
Data compiled February 2025.

Note: CAGR = Compound Annual Growth Rate Source: S&P Global Commodity Insights

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The increase in production of heavier NGL products is surpassing that of lighter NGLs, with ethane production and recovery remaining flattish



Data compiled May 2025.

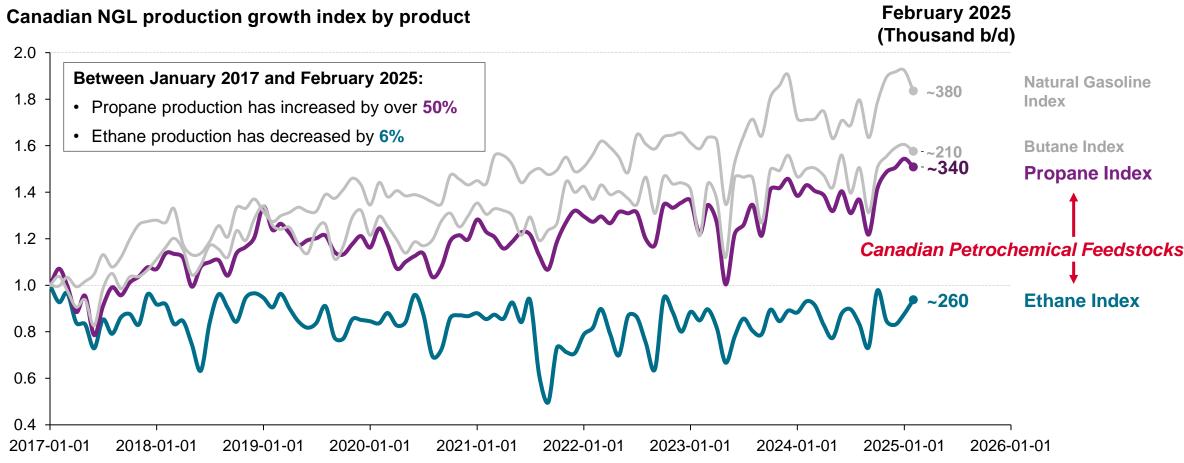
Notes: NGL data only represents gas processing / fractionation-based production and does not include refinery NGL volumes. Natural gasoline production does not include condensate volumes. Actual production data for the latest Statistics Canada month is shown in the chart for Canadian NGLs.

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





Ethane production linked directly with petrochemical demand since varying quantities are currently rejected, while propane follows upstream activity



Data compiled May 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.

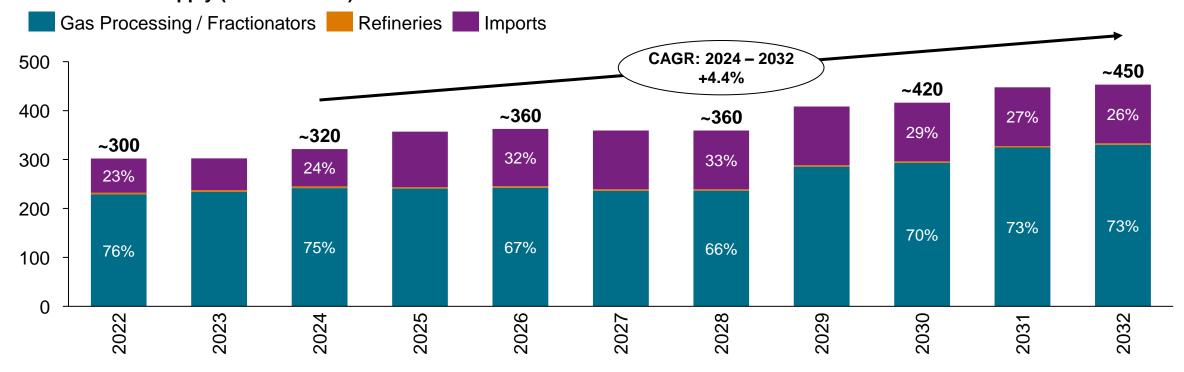
Source: S&P Global Commodity Insights, Statistics Canada, Canada Energy Regulator





Canadian ethane supply should increase from lows seen in 2022, but domestic production flat until the start-up of Dow's upcoming cracker

Canada ethane supply (Thousand b/d)



Domestic production will ultimately depend on domestic petrochemical demand and US import volumes since varying quantities of Canadian ethane are currently rejected.

Data compiled May 2025.

Notes: CAGR = Compound Annual Growth Rate. Supply excludes net inventory changes and other adjustments.

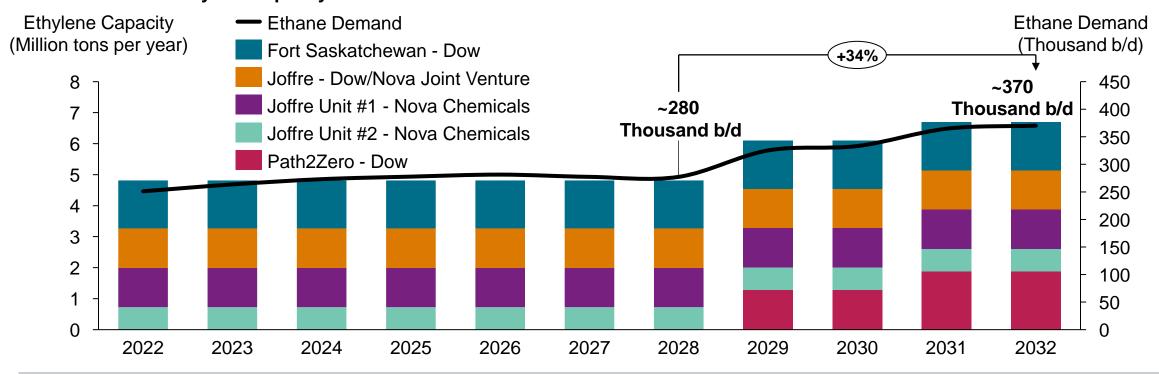
Sources: S&P Global Commodity Insights, AER, Government of British Columbia, Government of Saskatchewan, Statistics Canada, CER, EIA





Western Canadian ethane demand will increase significantly with the completion of Dow's Path2Zero cracker

Western Canada ethylene capacity and ethane demand



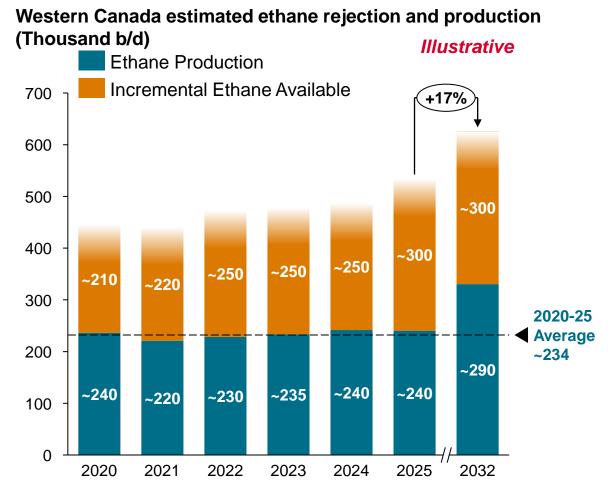
Once fully operational, the Dow Path2Zero facility is anticipated to boost Western Canadian ethane demand by around 110,000 b/d.

Data compiled May 2025. Source: S&P Global Commodity Insights

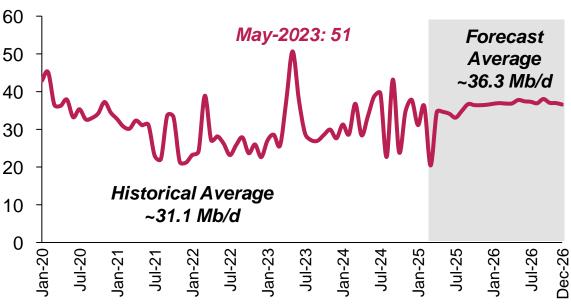




Varying quantities of Canadian ethane are currently rejected but adequate supply is available; new extraction facilities would be required



Alberta ethane imports (Thousand b/d)



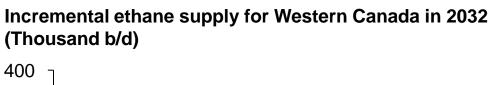
There is a sufficient supply of domestic ethane to serve as feedstock for the upcoming Dow ethylene cracker, as well as additional projects.

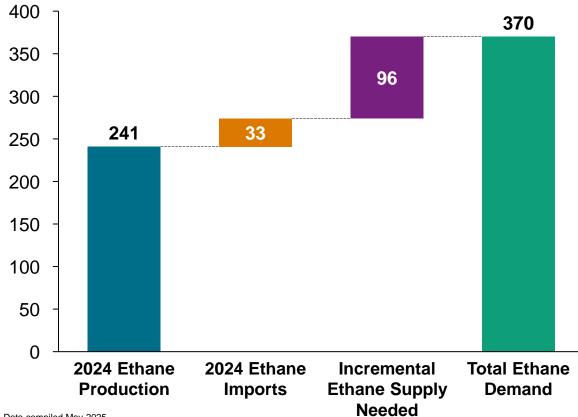
Data compiled May 2025.

Notes: Recoverable ethane estimated based on upstream reported gallons of NGLs produced per m3 of gas processed, an assumed recovery factor and forecasted natural gas production. Assumed rejection rate of between 35-50%. Sources: S&P Global Commodity Insights, AER, Government of British Columbia, Government of Saskatchewan, Statistics Canada, CER, EIA



Incremental ethane demand will require additional supply, which will likely be met by a combination of stronger domestic production and imports





Data compiled May 2025

Notes: Ethane demand based on the assumption that all ethylene facilities operate at a utilization rate of ~90%. The list of select companies mentioned is not exhaustive and serves as a representative sample. Additional companies may also be relevant to the context discussed. Source: S&P Global Commodity Insights

Possible sources for incremental ethane supply in 2032 (Thousand b/d)

Incremental Imports

Incremental Extraction from Existing Facilities

88

96

Incremental Extraction from New Facilities

Select companies that are active and investing in Western Canada







() interpipeline



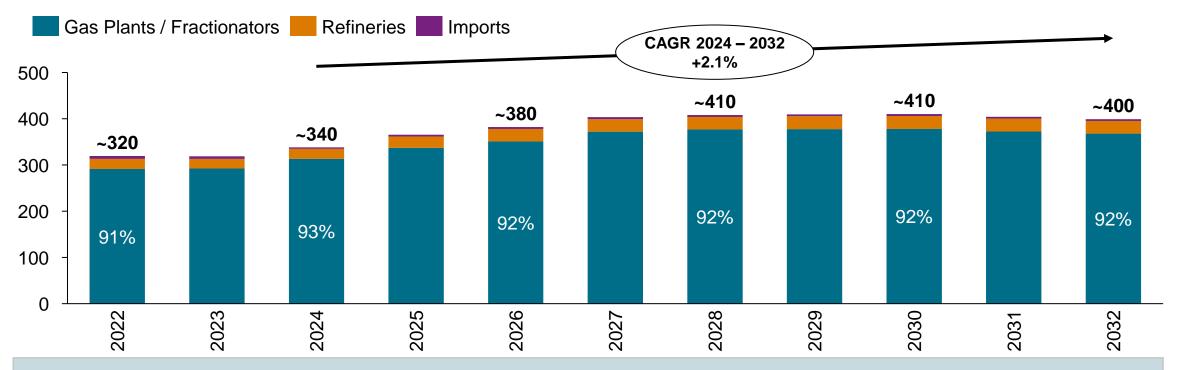


PLAINS



Canadian propane supply is expected to continue recovering following a dip in 2020; longer-term outlook growth will be driven by LNG exports

Canada propane supply (Thousand b/d)



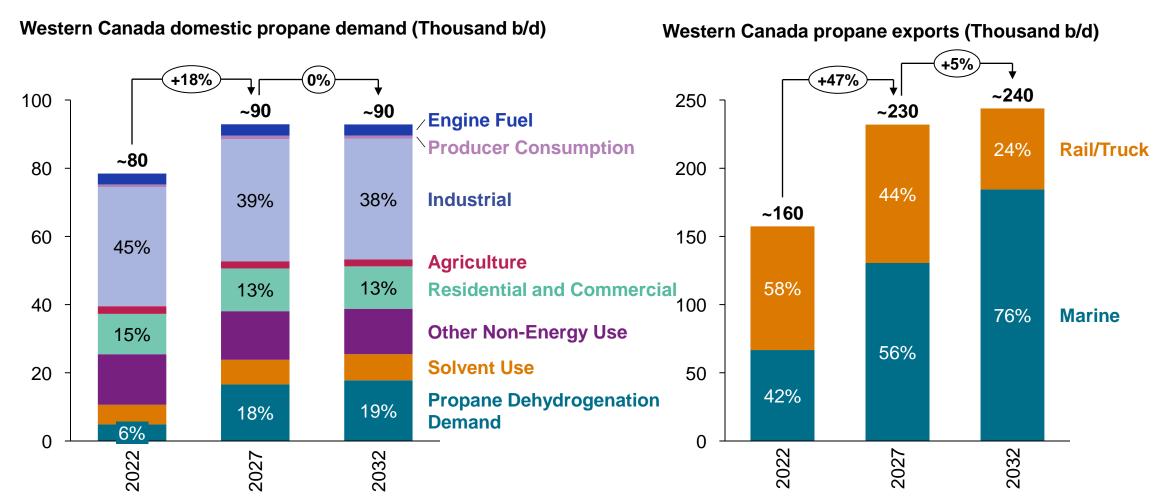
Western Canada accounts for about 80% of Canada's propane supply and demand, greatly exceeding that of Eastern Canada, making it the prime region for future propane projects.

Data compiled May 2025.

Notes: CAGR = Compound Annual Growth Rate. Supply excludes net inventory changes and other adjustments. Refinery production includes bio-propane production. Sources: S&P Global Commodity Insights, AER, Government of British Columbia, Government of Saskatchewan, Statistics Canada, CER, EIA



Western Canadian propane domestic demand has grown, primarily due to PDH demand, but exports will increase to deal will increasing supply



Data compiled May 2025

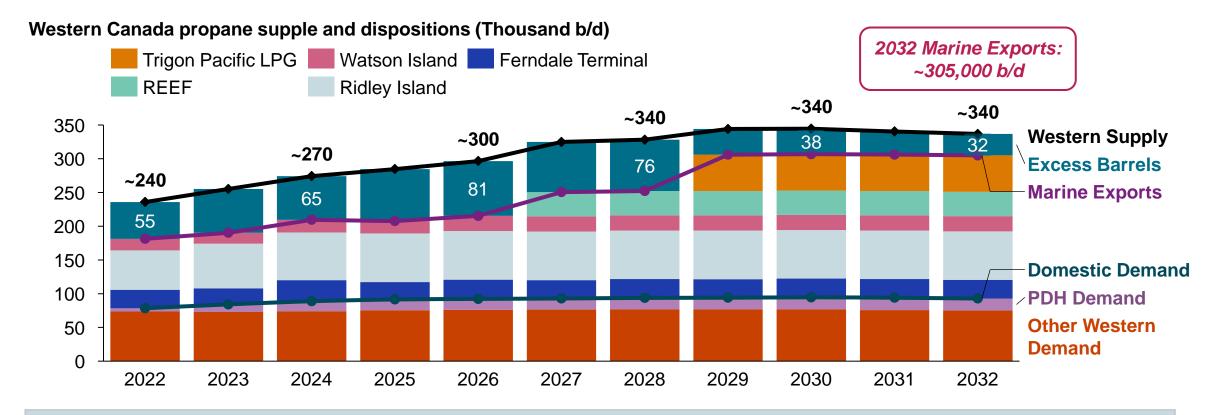
Notes: Marine exports do not include rail volumes directed to Ferndale, Washington.

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

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Increased export of propane via marine terminals will be bolstered by the addition of new facilities, albeit at the cost of surplus barrels



If Trigon's terminal is not included, there would be additional excess supply available that could support the construction of additional PDH facilities in Western Canada.

Data compiled May 2025.

Notes: Assumed marine export terminals operate at a utilization rate of 90%.

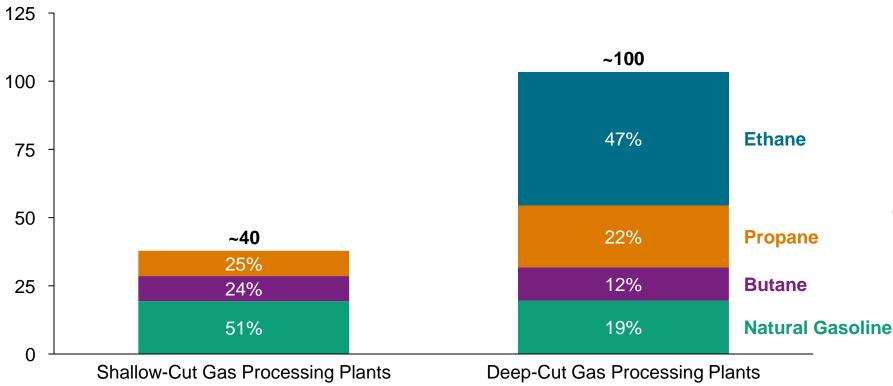
Sources: S&P Global Commodity Insights, AER, Government of British Columbia, Government of Saskatchewan, Statistics Canada, CER, EIA





Expanded development of Western Canadian resources through "nation-building" projects could unleash an incremental supply of NGLs

Incremental NGL production from 1 Bcf/d of Montney sourced natural gas (Thousand b/d)



- The Government of Canada aims to accelerate the development of major "nation-building" projects, which could significantly transform the Canadian petrochemical and NGL landscape.
- Projects could also have the potential to deepen Canada's trade relationships with reliable partners.

Data compiled May 2025

Notes: Gas processing plants based on an assumed 200 MMcf/d inlet design with a utilization rate of 95% and fed by a stream of liquid-rich Montney natural gas. Deep-cut plant assumed to have an ethane recovery rate of 90%. Source: S&P Global Commodity Insights



Key takeaways

Ethane is expected to remain a competitive feedstock for ethylene production.

Domestic ethane production/recovery depends on domestic petrochemical demand and US import volumes.

Ample domestic ethane is available to meet new Western demand, but additional extraction facilities and investment will likely be needed.



Domestic propane demand will be relatively stable, but future petrochemical projects are less certain than marine export facilities.

LNG activity will spur upstream activity, resulting in additional LPG supply.

Government support of "nation-building" projects could boost resource development and improve market access.

Feedstock is available for additional petrochemical projects; however, future investments are not assured

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