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Turn Me Loose – Can Pipelines Keep Up With Canadian Crude Oil Growth?

New Capacity Aims to Stay Ahead of Rising WCSB Output



- Production has jumped, but price discounts have been a frequent problem
- Pipeline capacity has struggled to keep up with increasing output
- Available pipeline space, seasonality has impacted WCSB crude prices
- Western Canadian crude reaches the U.S. via pipelines, rail service
- With production rising, several pipeline projects under development
- Oil sands producers poised to significantly ramp up crude oil output
- Will new pipeline capacity be able to keep up with production growth?

1. Introduction

For much of the past two decades, the story of Western Canada's crude oil industry has been one of remarkable growth constrained by a single recurring challenge: getting barrels to market. The Western Canadian Sedimentary Basin (WCSB) has become one of the world's premier oil-producing regions, propelled by the continued development of Alberta's oil sands, rising condensate production from liquids-rich natural gas plays, and steady improvements in production efficiency. Yet virtually every major chapter in that growth story has been accompanied by debates over pipeline capacity, market access and the discounts producers must accept when transportation infrastructure falls behind production.

Those issues remain just as relevant today. Canadian crude and condensate production has climbed to record levels, with the overwhelming majority coming from the WCSB. The startup of the Trans Mountain Expansion (TMX) project in 2024 temporarily eased years of transportation bottlenecks and significantly improved access to Pacific markets (see photo above). Price differentials narrowed, crude-by-rail shipments retreated, and Canadian producers gained greater exposure to overseas buyers. But as history has repeatedly shown, relief from takeaway constraints can be short-lived when production continues to grow.

The underlying challenge is straightforward. Western Canada has no shortage of oil resources. The oil sands alone contain one of the world's largest recoverable crude accumulations, and most major producers continue to identify opportunities to expand output through brownfield projects that are considerably less capital-intensive than the massive greenfield developments that characterized earlier decades. At the same time, condensate production from the Montney and other liquids-rich plays continues to increase, supplying the diluent needed to move heavy bitumen through pipeline systems. The resource base can support decades of additional production growth. The more difficult question is whether transportation capacity can expand quickly enough to keep pace.

Pipeline constraints matter because they directly influence producer economics. When export capacity becomes scarce, barrels compete for limited space, inventories build, crude-by-rail becomes more attractive despite its higher cost, and Western Canadian crude discounts widen relative to U.S. benchmarks. When additional capacity enters service, those discounts typically narrow as producers gain access to a broader group of refiners and export markets. The relationship is rarely perfect, since refinery demand, seasonal production swings, maintenance schedules and global crude fundamentals also play important roles, but the long-term correlation has been difficult to ignore.

The timing of production growth adds another layer of complexity. Oil sands output follows a seasonal pattern driven largely by maintenance schedules, with production typically reaching annual lows during the spring turnaround season before climbing toward year-end highs. Those seasonal swings can amount to several hundred thousand barrels per day, creating periods when pipeline takeaway capacity appears comfortably supplied followed only months later by renewed congestion. As a result, pipeline utilization, crude price differentials and transportation economics often fluctuate throughout the year rather than following a simple long-term trend.

Meanwhile, Western Canada's customer base continues to evolve. For years, the U.S. Midwest served as the primary destination for incremental Canadian production before new downstream pipeline connections increasingly opened access to Gulf Coast refiners. More recently, TMX has established a direct outlet to Pacific markets, allowing Canadian crude to reach Asia in meaningful volumes while also reshaping crude movements within North America. These changing trade flows have reduced dependence on any single market and improved pricing opportunities, but they have also introduced new competitive dynamics as Canadian barrels seek the highest-value destinations.

Looking ahead, another investment cycle may already be taking shape. Pipeline companies are proposing incremental expansions to existing systems, optimization projects, and entirely new transportation corridors. At the same time, oil sands producers continue advancing expansion projects that could add substantial new production over the next several years. Not every proposed pipeline will move forward, and not every production project will reach a final investment decision (FID). Instead, the next chapter will likely be defined by a continual balancing act between upstream growth, midstream investment, regulatory approvals and commercial commitments.

This report examines those moving pieces as parts of a single system rather than as isolated developments. Production growth influences pipeline demand. Pipeline capacity affects price discounts. Price signals shape investment decisions, while changing export markets alter the economics of every additional barrel produced. Understanding how those factors interact is essential to evaluating whether Western Canada's crude oil industry has entered a period of sustained transportation adequacy — or whether another round of pipeline constraints is already beginning to emerge.

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