Rail Energy Transportation Advisory Committee

Refiners and Petrochemicals Perspective

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October 2026

Agenda

- AFPM Member Survey
- PADD 5 Update/Concerns
- Railroad Resiliency and First Mile/Last Mile

Refining Overview

Refined petroleum products remain essential to meeting global energy demand

1. Refined petroleum products supply more than 1/3 of U.S. and global energy demand
2. Global demand for petroleum derived products is expected to continue to grow through 2050
3. U.S. has the most complex refining industry in the world, capable of refining any grade of crude oil
4. U.S. produces more refined products than any other country in the world

Petrochemical Overview

While global markets are reeling from overcapacity and a regulatory onslaught, markets will stabilize and when they do the U.S. is positioned to be a leader

1. U.S. Petrochemical Manufacturing generates more than $57B in labor income and contributes over $180B to U.S. economy
2. The U.S. is a leader in the production of both ethylene and propylene
3. U.S. has feedstock and supply chain advantage over global competitors
4. U.S. advantages have somewhat insulated U.S. from impacts of global conflicts

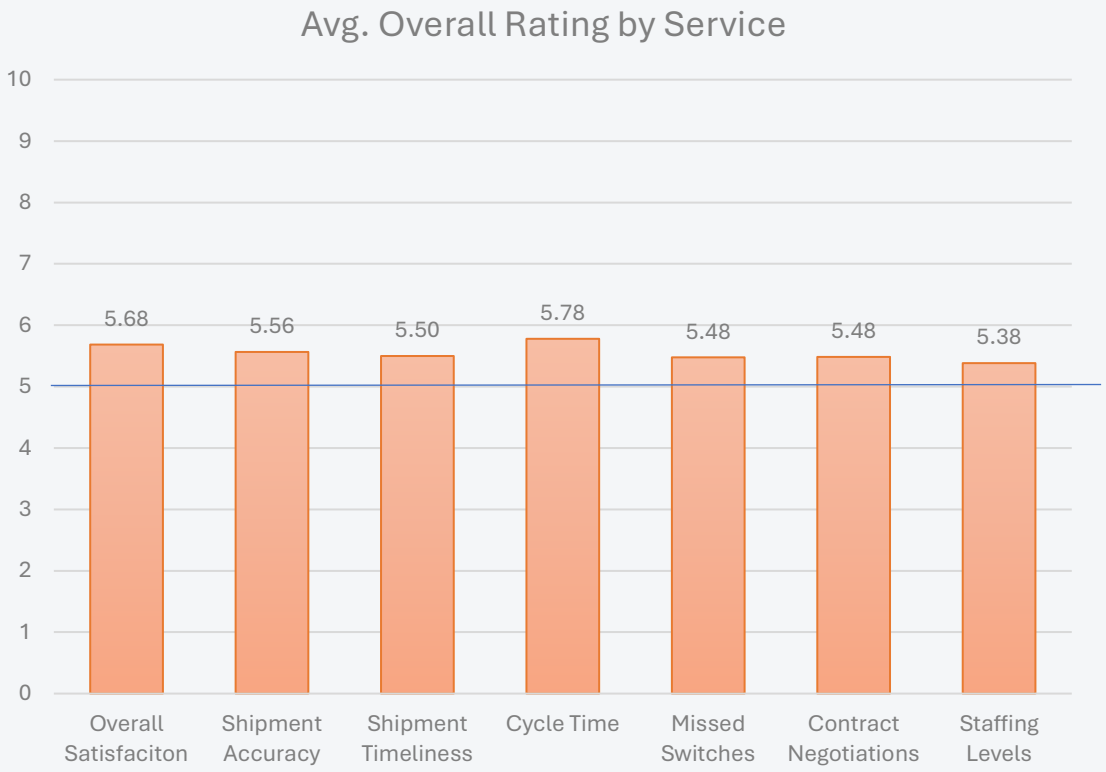
Freight Rail and the Refining / Petrochemical Industry

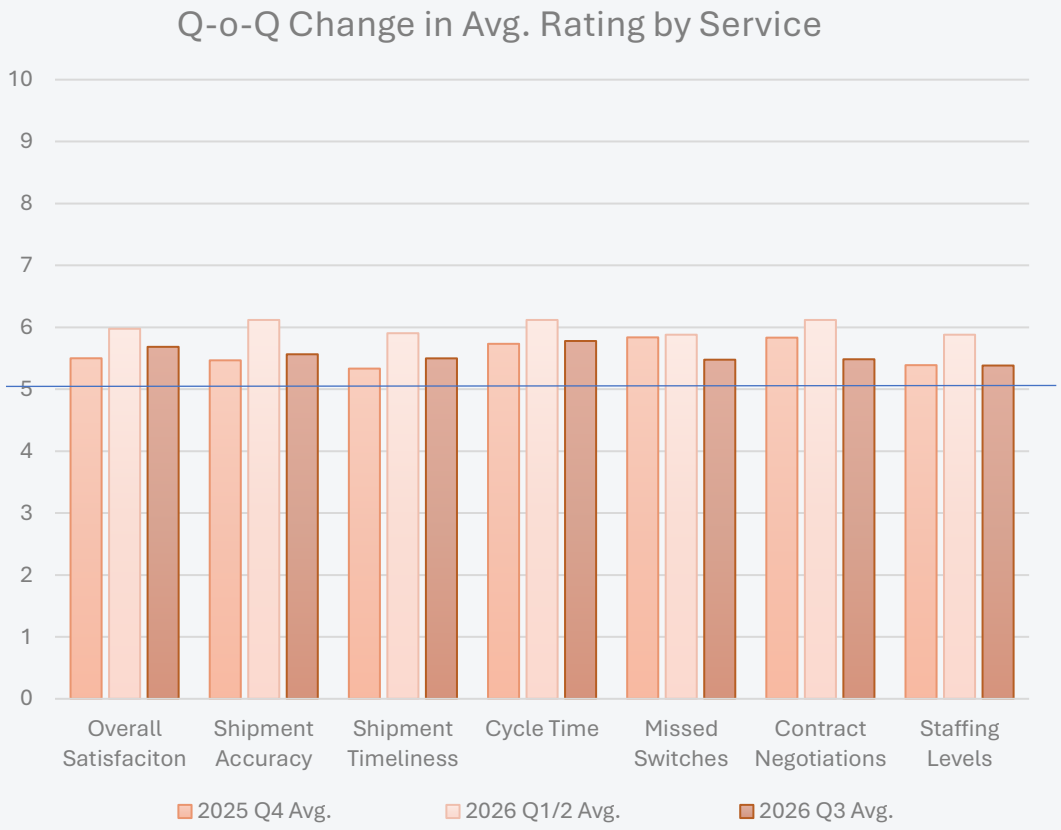
Why Rail Matters …

- Specialized Transport of Hazardous Materials - Freight rail safely transports large volumes of hazardous fuels and chemicals using specialized tank cars with strict safety systems. Often these are shipments that can't be moved via other modes.
- Operational Resilience and Connectivity - Rail networks provide reliable inbound and outbound flows critical for refining and petrochemical production continuity and market responsiveness.
- Economic and Environmental Benefits - Rail freight offers energy-efficient, cost-effective transport with lower emissions supporting sustainability goals in chemical industries.
- Impact of Rail Disruptions - Rail congestion and labor shortages cause supply chain disruptions, price volatility, and production interruptions in fuel and chemicals.

AFPM Freight Survey Results

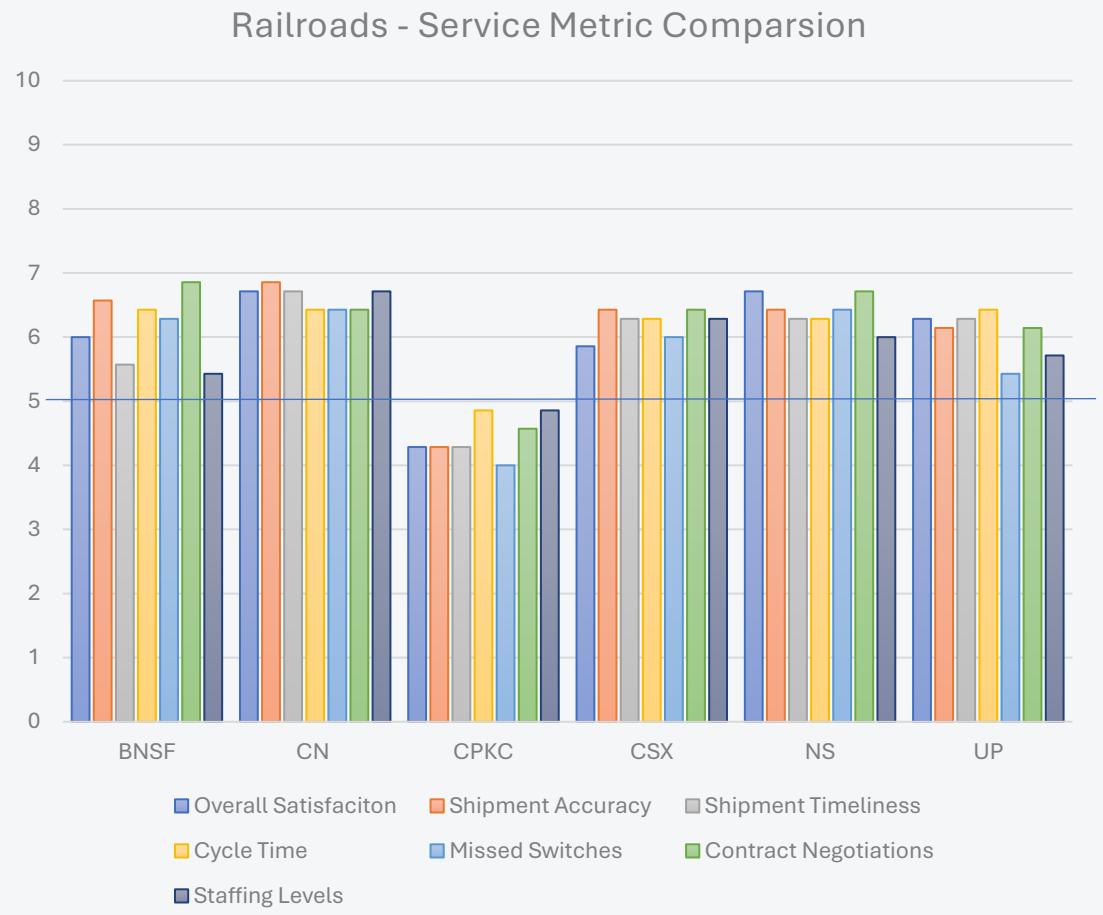
Sentiment Survey – Aggregate Service and Quarter over Quarter

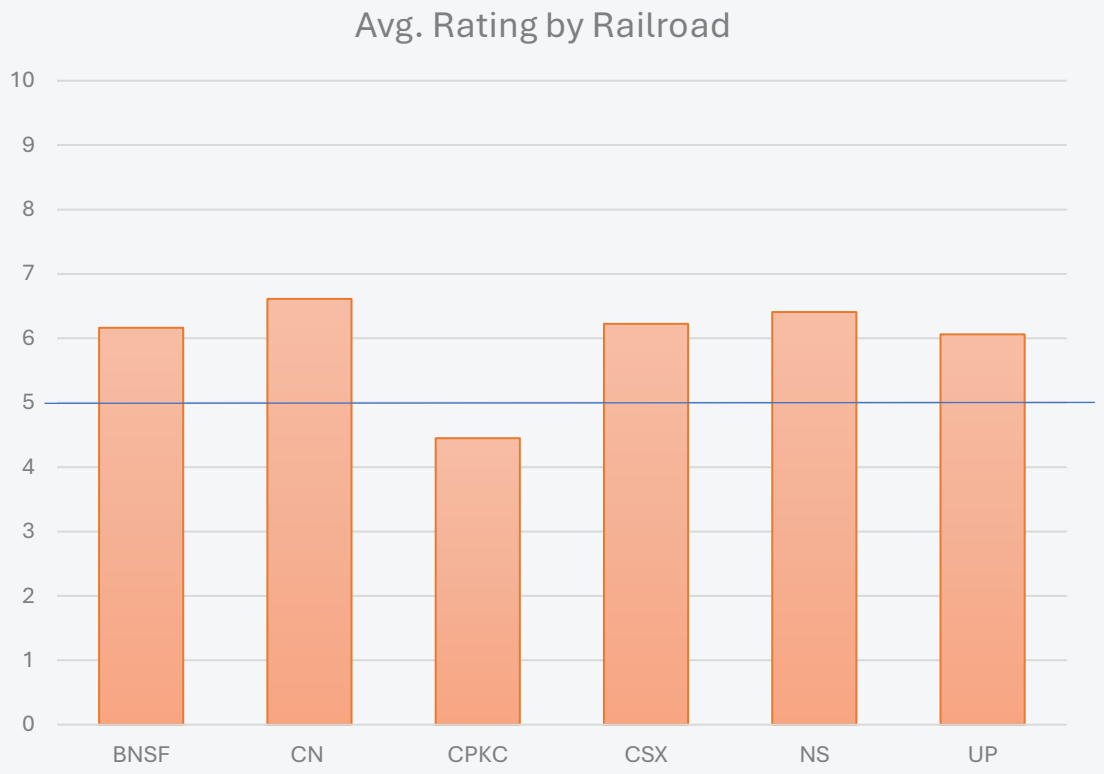




AFPM Freight Survey Results

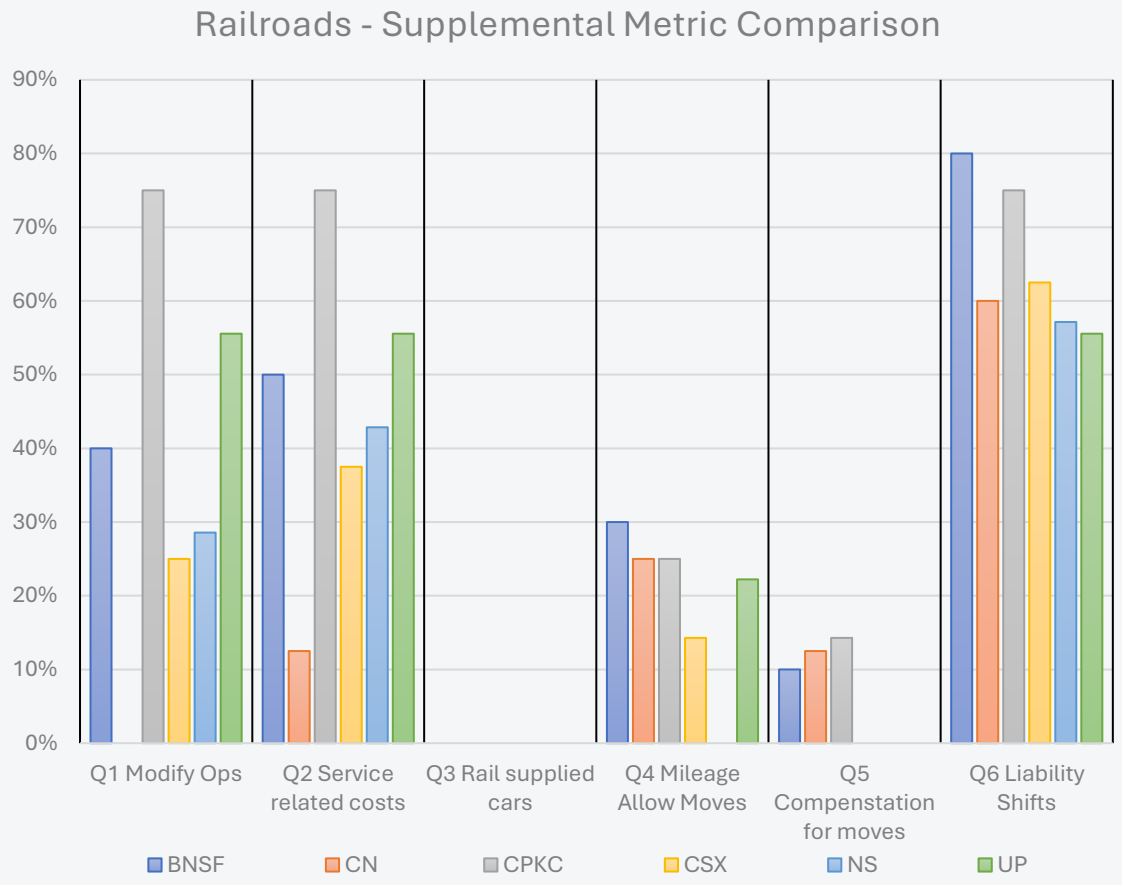
Sentiment Survey – Service by Railroad and Overall Rating





AFPM Freight Survey Results

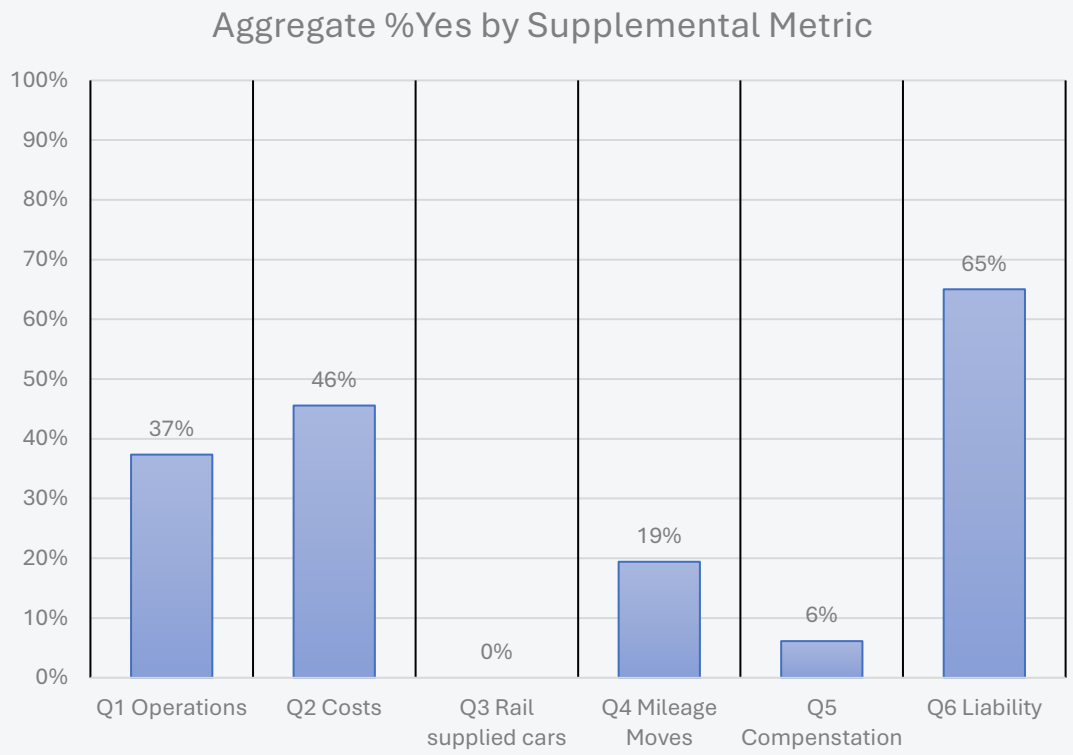
Supplemental Insights – By Railroad and Topic

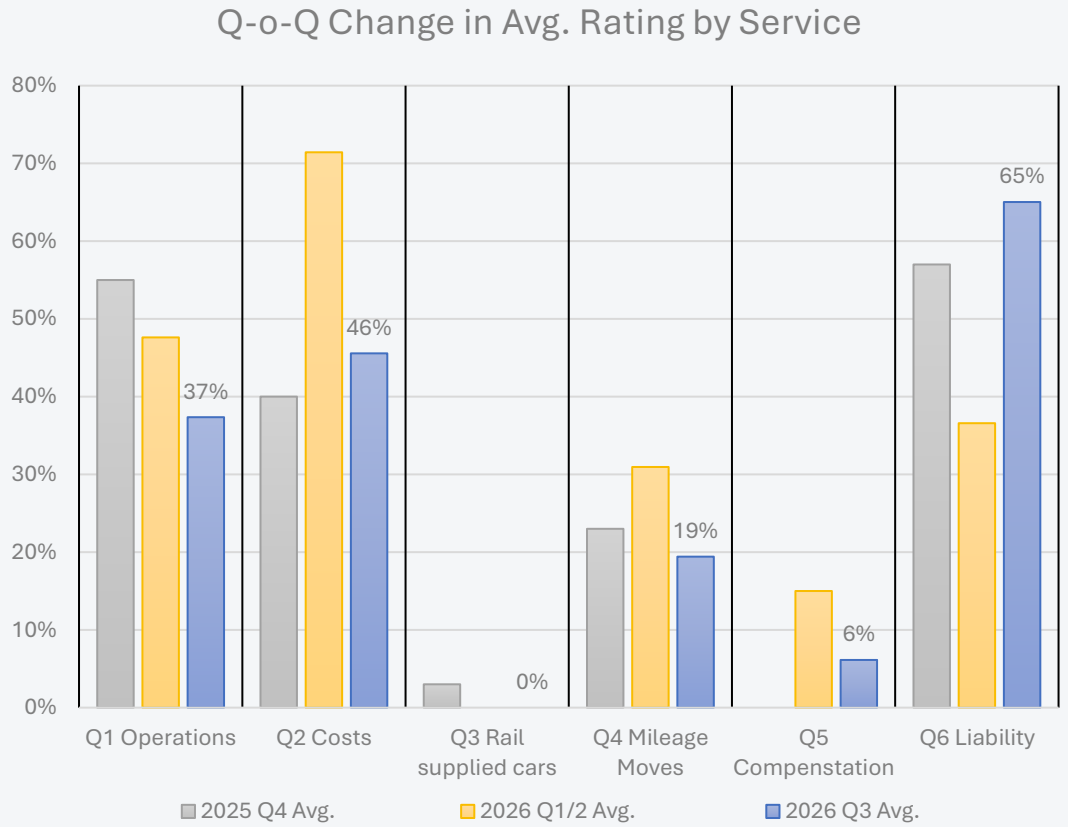




AFPM Freight Survey Results

Supplemental Insights – Aggregate and Quarter over Quarter





AFPM Freight Survey Results

Key Takeaways



Overall rail service is slightly above average but overall satisfaction has declined since last survey.



Shifting liability and service-related costs are biggest concerns and most members do not believe they are adequately compensated for their ownership costs.



CN is the highest rated and most consistent railroad over previous surveys whereas CPKC is worst performer.







NPGA

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October 2026

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SVP – Regulatory & Industry Affairs

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ENERGY FOR EVERYONE



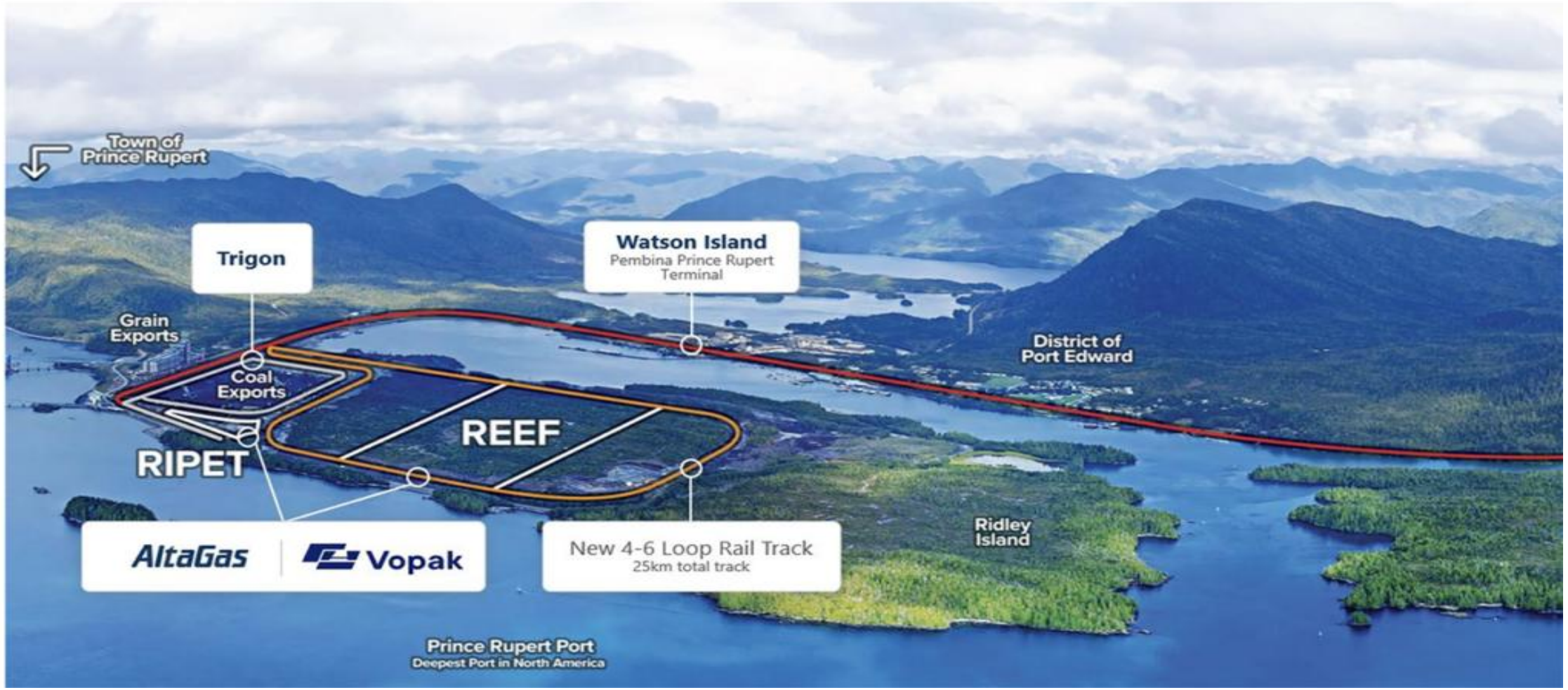
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Pending Concerns in 2027

- PADD 5 refinery capacity is significantly lower, and projected to stay lower.
- No pipeline can move propane to PADD 5, and no port exists with storage to take a ship, with or without the Jones Act.
- Therefore, PADD 5 can only be served by rail and declining refinery output.
- Canada's Ridley Island Energy Export Facility (REEF) will be expanding in 2027, and is projected to take approximately 1000 cars off the tracks.
- While cars are the duty of the shipper, shippers need partnerships and cooperation from rail to get them to constrained locations.
- Given the constraints in PADD 5, shippers will be looking for assistance from rail to get sufficient cars to PADD 5 to deal with REEF's expansion and refinery capacity issues.

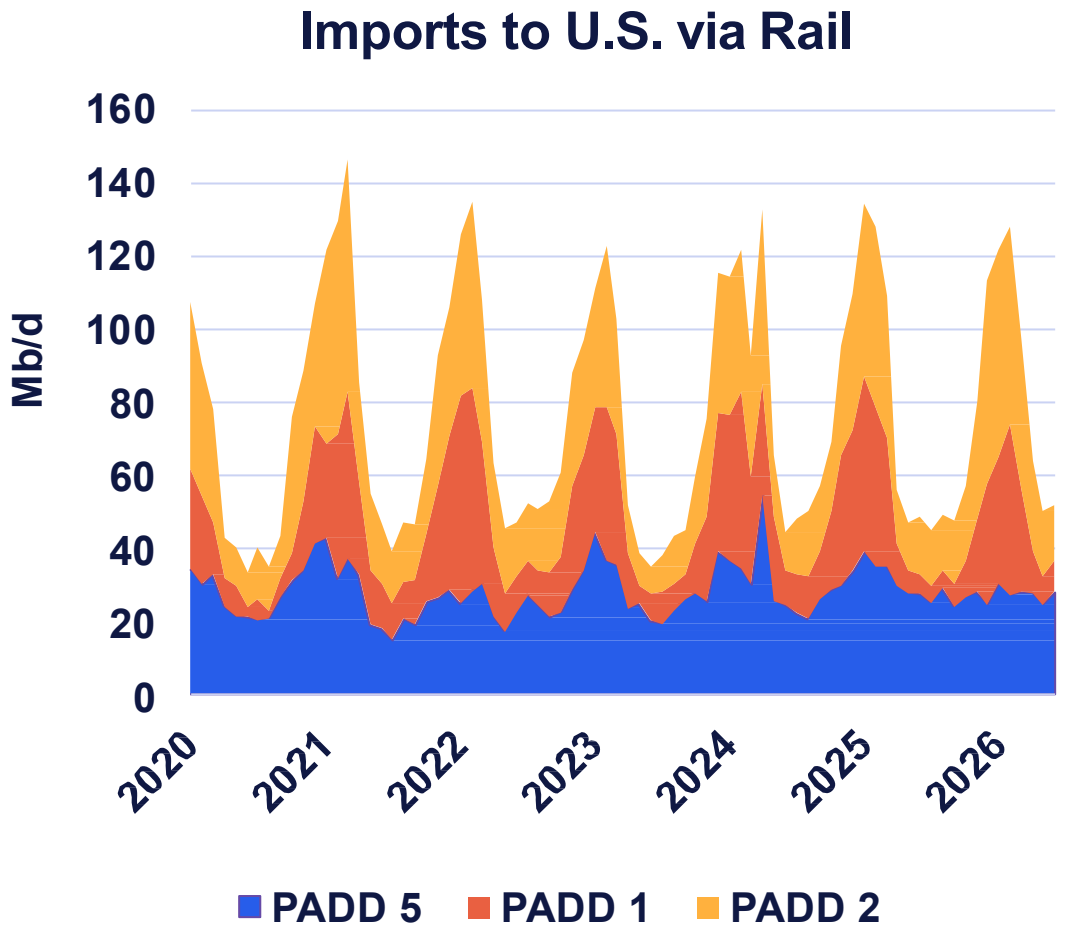
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Figure 2: REEF Geographic Location



Propane Imports from Canada via Rail

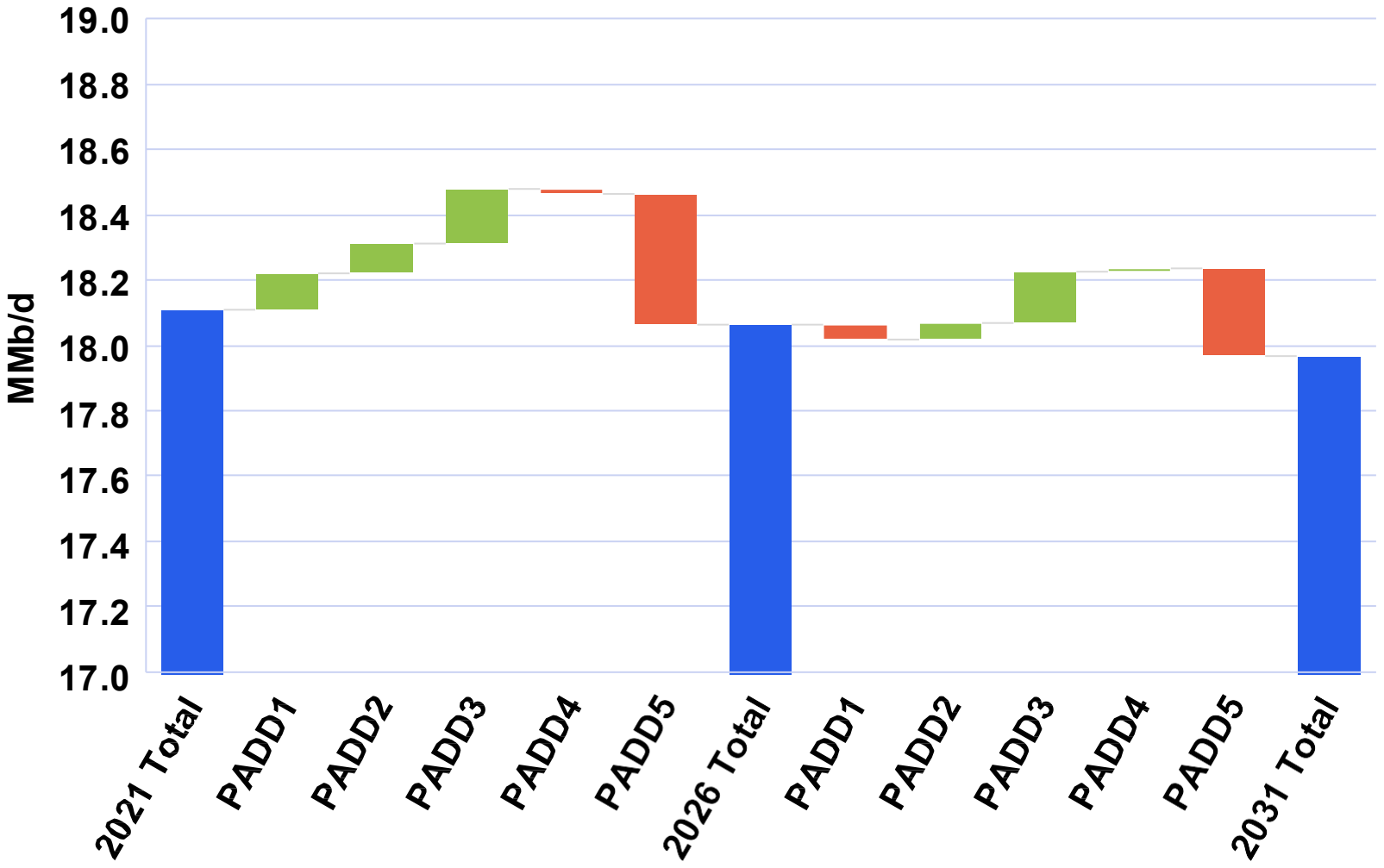
- PADD 5 has no inbound pipeline capacity from Canada and relies only on rail for imports
- Imports from Canada by rail are highly seasonal in PADDs 1 & 2, ranging from only 20 Mbbl/d in summer to 100 Mbbl/d in winter
- REEF terminal on Canada's west coast could potentially impact these imports when it ramps up in 2027, as it takes ~1000 rail cars out of the market



Source: EIA

U.S. Operable Refinery Capacity*

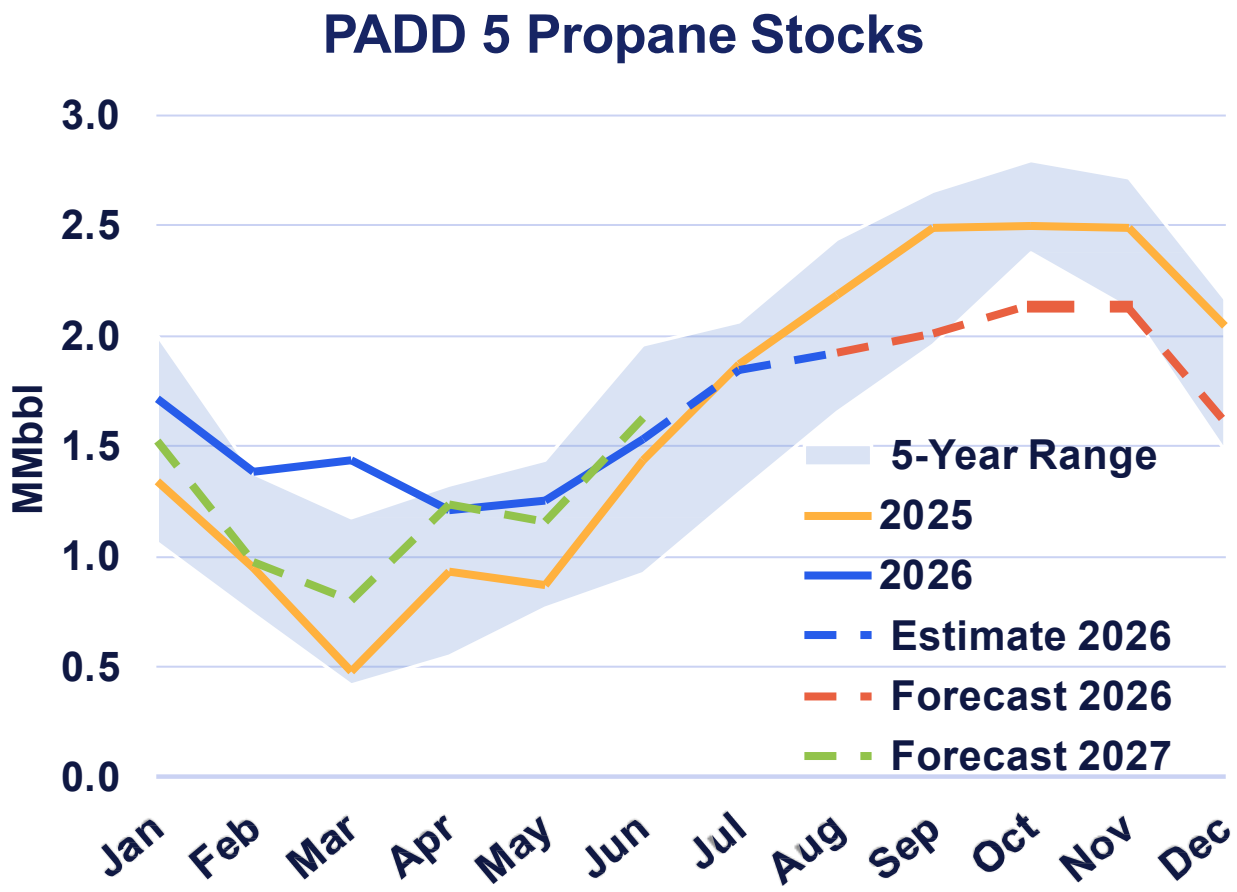
*Excludes Biofuels



- Total capacity declines about 0.8% or 140 Mbbl/d from 2021 to 2031
- PADD 5 capacity sees a significant 25% decline of 670 Mbbl/d in the same timeframe

Source: Novi Future of Fuels July 2026

PADD 5 (West Coast) Stocks

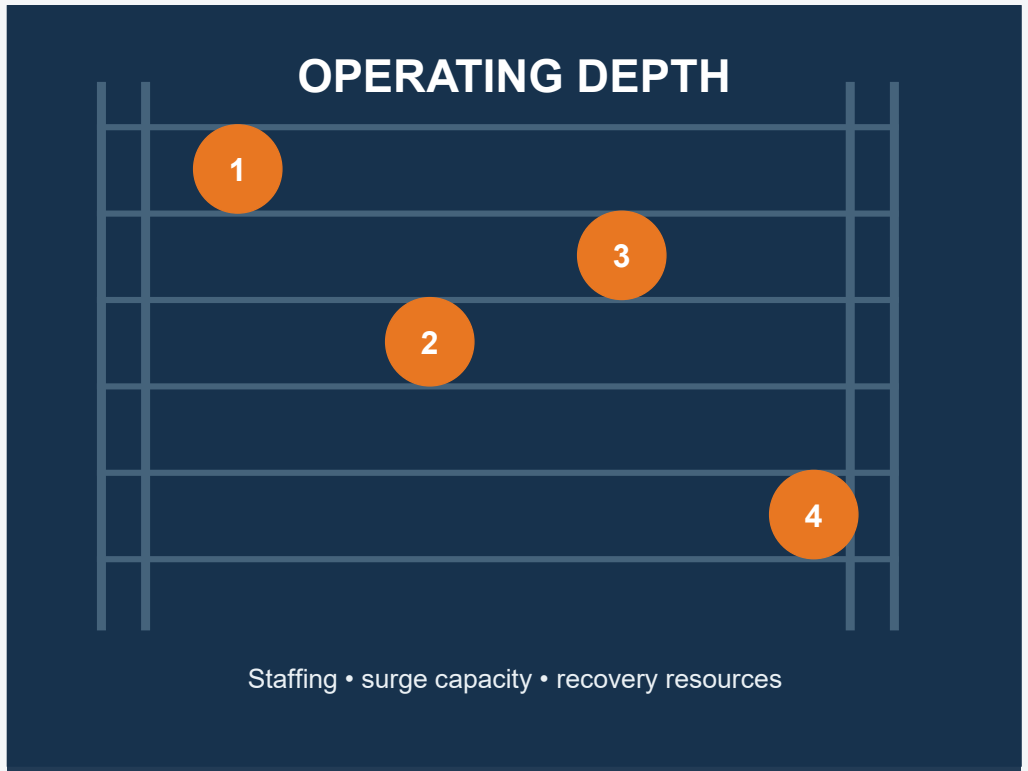


- PADD 5 stocks are forecast to fall below the five-year average as winter begins
- Very little gas processing, and refinery closures force a call on imports from elsewhere to make up for lost supplies
- All propane moving to PADD 5 gets there by rail

Source: EIA (history), Novi (Estimate & Forecast)

A railroad cannot grow what it is not staffed to handle

Crew availability is both a commercial capacity issue and a resilience issue.



Network scale is not a substitute for operating depth.

1

Growth capacity

If crews are not available, new rail business cannot be added consistently or confidently.

2

Winter resilience

A lean operating plan may perform in normal conditions but leave insufficient recovery capacity during severe weather.

3

Customer confidence

Refiners need confidence that service can absorb disruption without extended outages or unpredictable recovery.

RETAC question: Are current staffing models sufficient for both growth and disruption recovery?

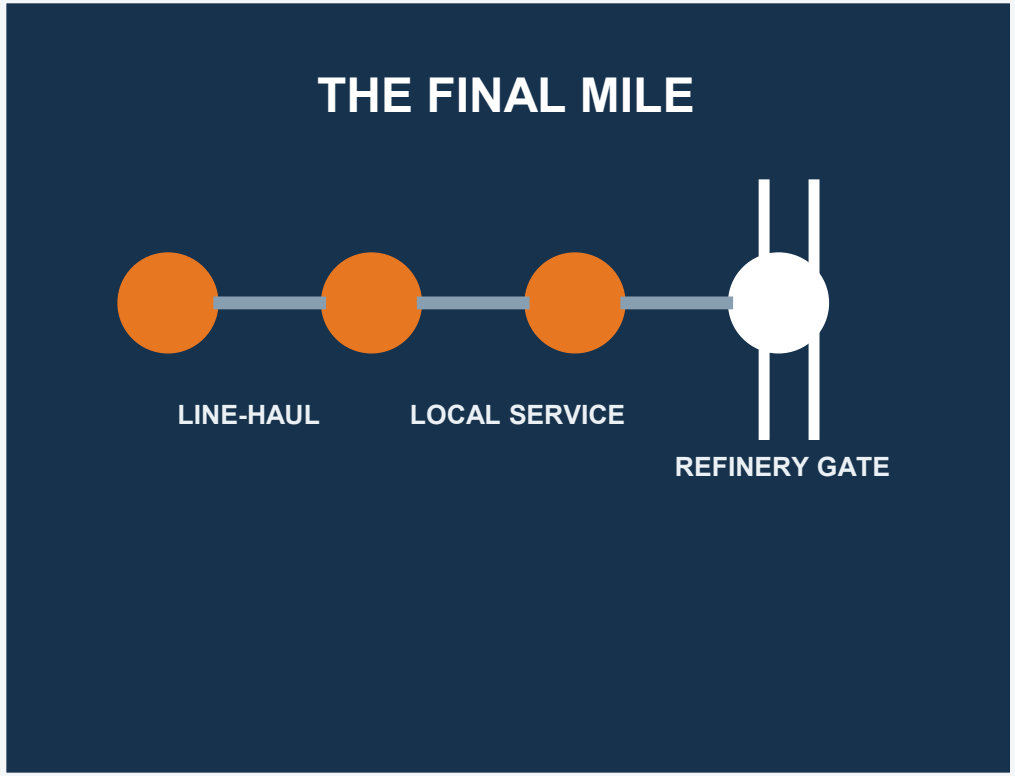
The final mile determines whether network efficiency creates customer value

Faster line-haul transit does not help if the destination cannot receive dependable local service.

Faster transit — Cars arrive sooner

Limited final-mile service — Cars accumulate at destination

Higher dwell & demurrage — Customer pays for a service constraint



The customer experiences the railroad at the refinery gate.

Reliability is the barrier to truck conversion

A truck can be scheduled for 0800, seven days per week. Rail often dictates the service days and a broad delivery window that may not align with refinery staffing.